CDP-C8ESD/C700/C800

SERVICE MANUAL

US Model
CDP-C8ESD/C800

US Model
Canadian Model
AEP Model
E Model
CDP-C700

Photo : CDP-C700

SPECIFICATIONS

Compact Disc Player

Frequency response	2 Hz – 20 kHz (±0.3 dB)
Signal to noise ratio	More than 105 dB
Dynamic range	More than 95 dB
Harmonic distortion	Less than 0.003% (CDP-C8ESD/C800) Less than 0.004% (CDP-C700)
Channel separation	More than 98 dB (C700) More than 100 dB (C8ESD/C800)

Outputs

LINE OUT(FIXED) (phono jacks)	Output level 2 V (at 50 kiloohms) Load impedance over 10 kiloohms
LINE OUT (VARIABLE) (phono jacks) (CDP-C8ESD/C800)	Output level max 2 V (at 50 kiloohms) Load impedance over 10 kiloohms
DIGITAL OUT (OPTICAL) (optical output connector) (C8ESD/C800)	Wave length 660 nm Output level -18 dBm
HEADPHONES (stereo phone jack)	Output level max. 15 mW Load impedance 32 ohms

General

Power requirements	US, Canadian model : AC120V, 60Hz AEP model : AC220V, 50/60Hz E model : AC110-120/220-240V, 50/60Hz
Power consumption	12 W
Dimensions	Approx. 470 × 125 × 385 mm (CDP-C8ESD) Approx. 430 × 125 × 385 mm (w/h/d) (CDP-C700/C800) Including projecting parts and controls
Weight	Approx. 7 kg (15 lbs 7 oz), net (CDP-C8ESD) Approx. 5.5 kg (12 lbs 2 oz), net (CDP-C700) Approx. 6 kg (13 lbs 4 oz), net (CDP-C800)

Remote Commander RM-D805/RM-D705

Remote control system	Infrared control
Power requirememts	3 V DC with two batteries size AA (IEC designation R6)
Dimensions	67×20×175 mm (w/h/d) (2 3/4×13/16×7 inches)
Weight	141 g (5 oz) including batteries

Supplied Accessories

- Connecting cord
  - (2 phono plugs ←→ 2 phono plugs) (1)
- Remote commander (1)
- Size AA batteries (2)

Design and specifications subject to change without notice.

MICROFILM

COMPACT DISC PLAYER

SONY®

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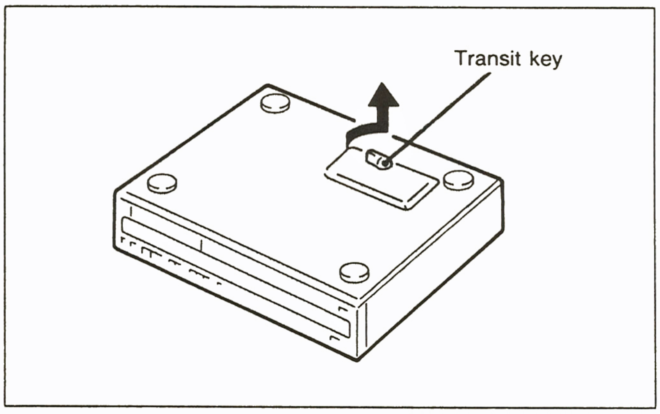
Note on the Transit Key

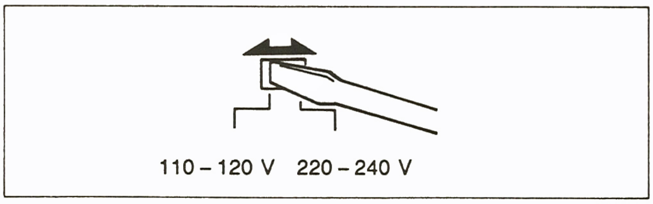


The white transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.

When transporting the unit, replace the key in its original hole and lock it in place.

Adjusting Operating Voltage

For the customers of the model equipped with the voltage selector (E model)
Check that the voltage selector is set to the local power line voltage. If not, set the selector to the correct position before connecting AC power cord to a wall outlet.



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

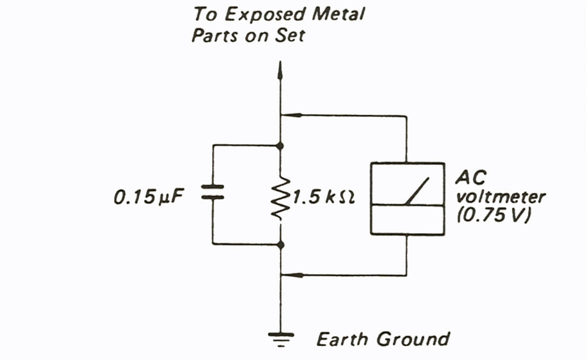
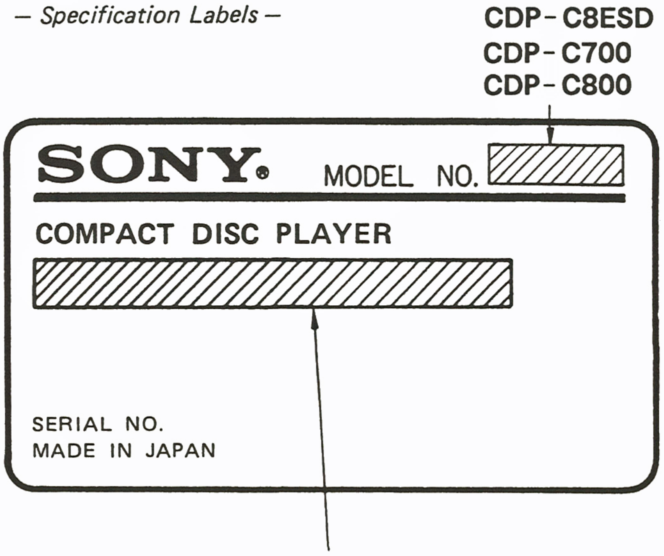


Fig. A. Using an AC voltmeter to check AC leakage.

MODEL IDENTIFICATION

– Specification Labels –



US, Canadian model: AC 120 V 60 Hz 12W
AEP model: AC 220 V 50/60 Hz 12W
E model: AC 110–120, 220–240 V 50/60 Hz 12W

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 nm
   - Emission Duration: continuous
   - Laser Output: max. 44.6 μW*

     * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optiocal Pick-up Block (including APC borad).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*

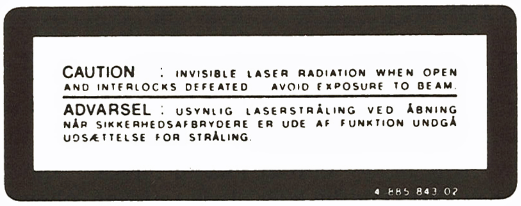
     * Målt i 1,6 mm afstand fra overfladen af objektiv-linsen pa den optiske pick-up enhed.
   - Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning



CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED AVOID EXPOSURE TO BEAM.

ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.

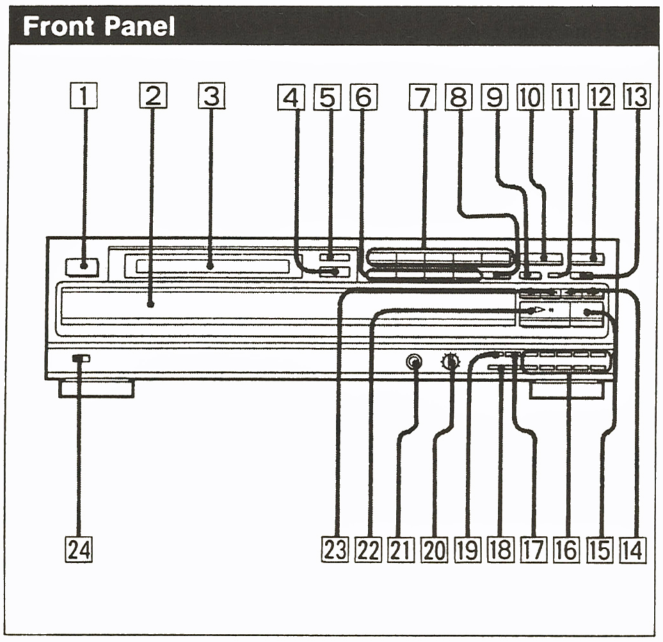
4 885 843 02

VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

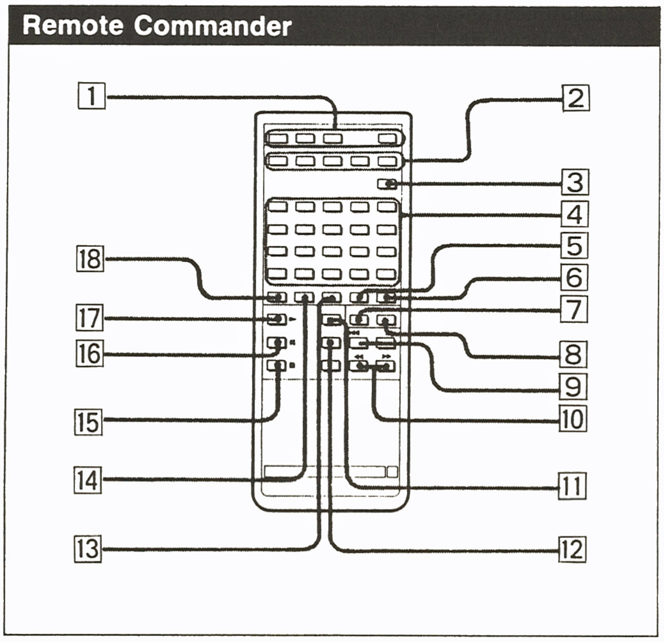
SECTION 1
GENERAL

Location and Controls

Front Panel



Remote Commander



1 POWER switch
2 Disc tray
3 Display window
4 Remote sensor
5 TIME/MEMO button
6 PLAY MODE buttons
  BANK button
  PROGRAM button
  SHUFFLE button
  CONTINUE button
7 DISC 1 – 5 buttons
8 REPEAT button
9 FILE (custom file) button
10 ⏏ OPEN/CLOSE button
11 ERASE (memory erase) button
12 DISC SKIP button
13 FADER (fade in/fade out) button
14 ◀◀ ▶▶ (manual search) buttons
15 ■ (stop) button
16 TRACK buttons (CDP-C8ESD/C800 only)
17 CLEAR (program clear) button (CDP-C8ESD/C800 only)
18 >10 (over 10) button (CDP-C8ESD/C800 only)
19 CHECK button (CDP-C8ESD/C800 only)
20 HEADPHONES LEVEL control
21 HEADPHONES jack
22 ▶II (play/pause) button
23 ⏮ ⏭ (AMS*) buttons
24 TIMER switch

1 PLAY MODE BUTTONS
  PGM (program) button
  SHUFFLE button
  CONTINUE button
  BANK button
2 DISC 1 – 5 buttons
3 DISC SKIP button
4 TRACK buttons
5 FILE (custom file) button
6 ERASE (memory erase) button
7 TIME button
8 REPEAT button
9 ⏮ ⏭ AMS buttons
10 ◀◀ ▶▶ (manual search) buttons
11 FADER (fade in/fade out) button
12 LINE OUT VOLUME (line out/headphone volume) buttons (CDP-C8ESD/C800 only)
13 CLEAR (program clear) button
14 CHECK button
15 ■ (stop) button
16 II (pause) button
17 ▶ (play) button
18 >20 (over 20) button

* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2
ADJUSTMENTS

2-1. MECHANICAL ADJUSTMENT

Chucking Arm Height Adjustment

This adjustment should be parformed after the electrical adjustment and on replacing adjusting screw, magnet, or chucking pulley.

Procedure:

1. Set disc (YEDS-18) to the optical pick-up block. (Fig. A)
2. Adjust the bracket (press pulley) to the center of the magnet with adjusting screw. (Fig. B)

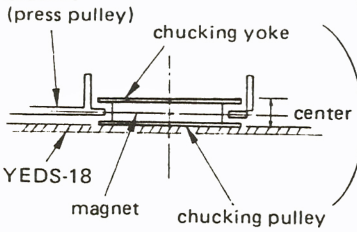

bracket
(press pulley)
chucking yoke
center
YEDS-18
magnet
chucking pulley

Fig. B

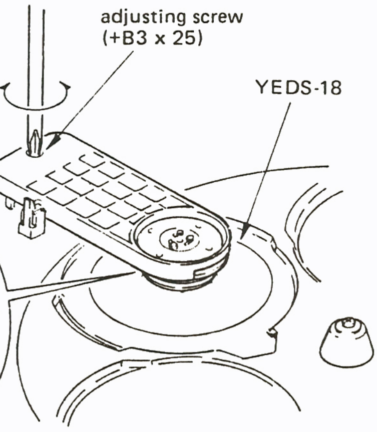
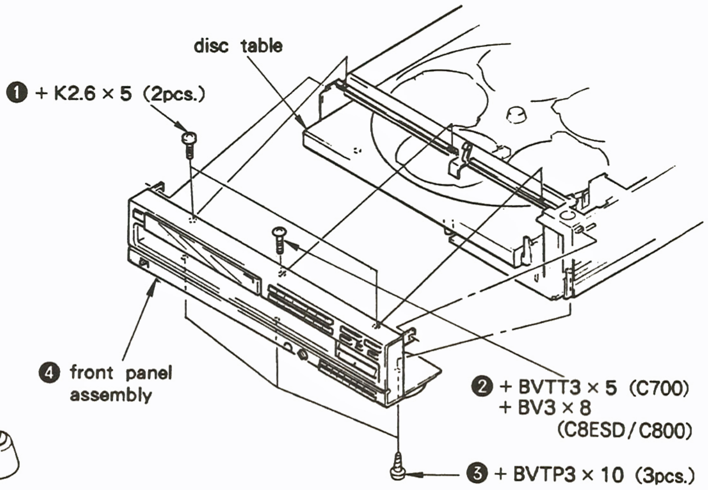

adjusting screw
(+B3 x 25)
YEDS-18

Fig. A

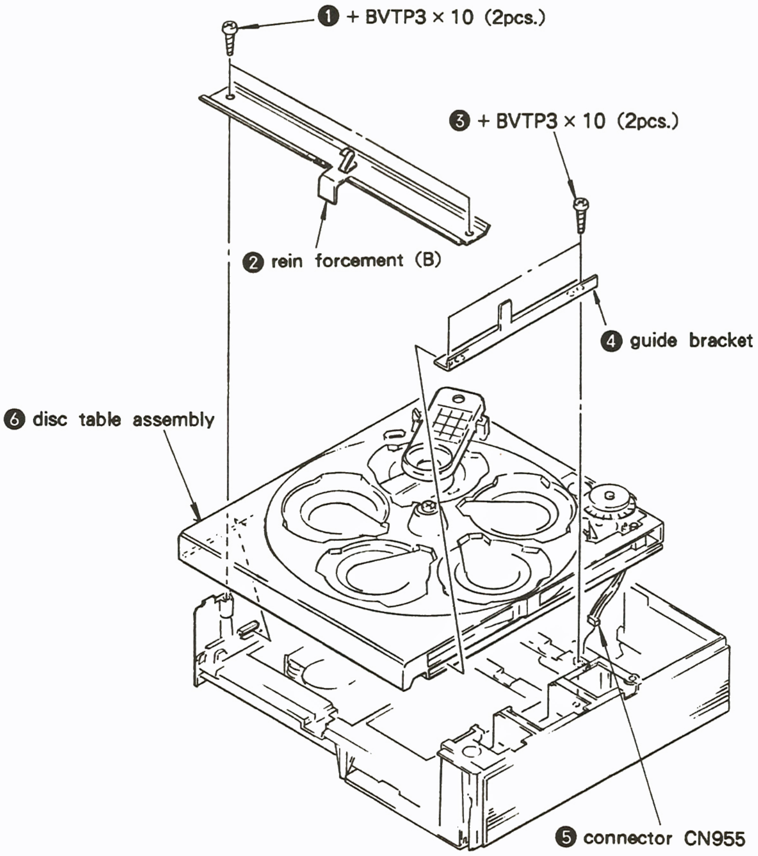
2-2. BEFORE ADJUSTMENTS

Note: Follow the disassembly procedure in the numerical order given.

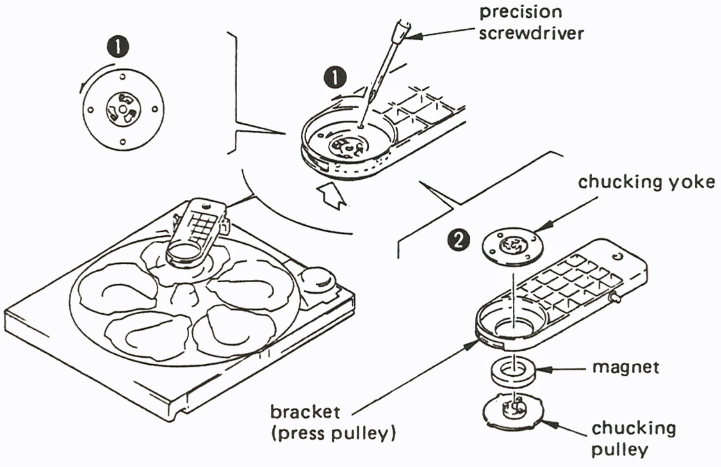
1. Remove the case.
2. Remove the frontpanel assembly.


disc table
❶ + K2.6 × 5 (2pcs.)
❹ front panel assembly
❷ + BVTT3 × 5 (C700)
+ BV3 × 8
(C8ESD/C800)
❸ + BVTP3 × 10 (3pcs.)

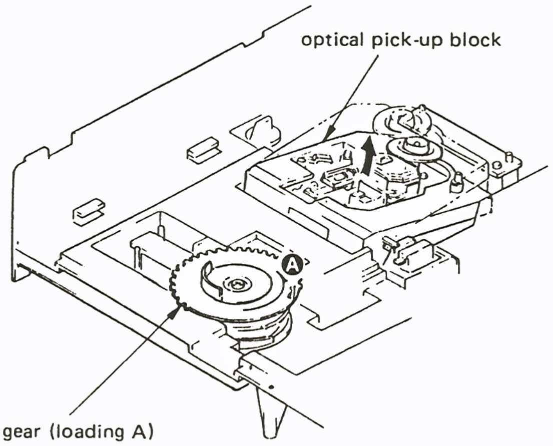
3. Remove the disc table assembly.


❶ + BVTP3 × 10 (2pcs.)
❸ + BVTP3 × 10 (2pcs.)
❷ rein forcement (B)
❹ guide bracket
❻ disc table assembly
❺ connector CN955

4. Remove the chucking pulley.


❶
precision
screwdriver
❶
chucking yoke
❷
magnet
bracket
(press pulley)
chucking
pulley

5. When the optical block is down under, move up it by rotating gear (loading A) in the arrow Ⓐ direction with hands.


optical pick-up block
Ⓐ
gear (loading A)

2-3. SERVICE MODE

1. Operation Check

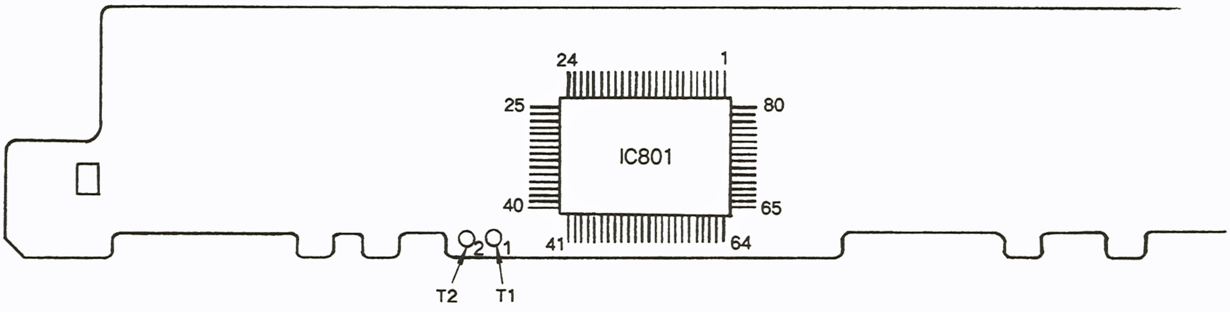
If the disc table has not been removed go directly to step 4, otherwise begin with step 1.

1. Remove the disc and then the magnet from the bracket.
2. Use the magnet to fix the disc in position.
3. Hold the CLOSE button down.
4. Connect test point T1 to ground with a lead wire.
5. Set the power switch (SW801) to on.
6. Play should automatically begin from the fifth track on the disc when in service mode.

2. Display Check

1. Connect test point T2 to ground with a lead wire.
2. Set the power switch (S801) to on.
3. Press the switches on the panel and check that each of the corresponding indicators lights.

[INDICATOR BOARD] — Conductor Side —

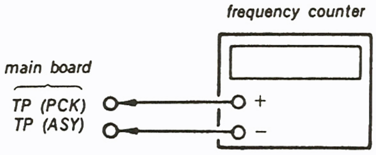

24
1
25
80
IC801
40
65
41
64
2
1
T2
T1

2-4. ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 (Part No: 3-702-101-01) disc unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.

RF PLL Frequency Adjustment/Lock Frequency Check

Procedure :

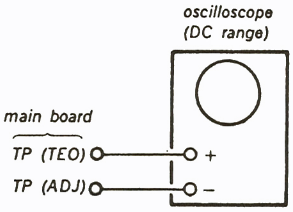


1. Put the set into test mode.
2. Connect test point TP (ASY) to ground with lead wire.
3. Turn POWER switch on.
4. Connect the frequency counter to test point TP (PCK).
5. Adjust RV201 so that the reading on frequency counter is 4.3218 MHz ±30 kHz.
   . . . . . (RF PLL frequency adjustment)
6. Remove lead wire connecting TP (ASY) to ground.
7. Set disc (YEDS-18) and press ▷ PLAY button.
8. Confirm that the reading on frequency counter is 4.3218 MHz.
   . . . . . (Lock frequency check)
9. Turn POWER switch off.

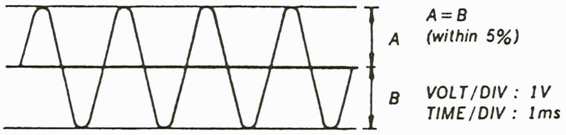
E-F Balance Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

Procedure :



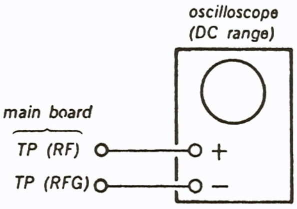
1. Put the set into test mode.
2. Connect test point TP (TES) to ground with lead wire.
3. Connect oscilloscope to test point TP (TEO).
4. Set disc (YEDS-18) and turn POWER switch on.
5. Adjust RV101 so that the traverse waveform is symmetrical above and below.
6. Turn POWER switch off.
7. After adjustment, remove the lead wire connected in step 5.



Focus Bias Adjustment

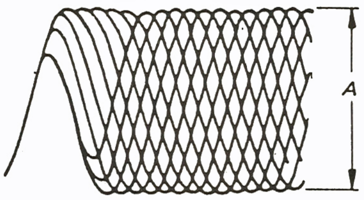
This adjustment should be made when replacing TOP (T-type Optical Pick-up).

Procedure :



1. Put the set into test mode.
2. Connect oscilloscope to test point TP (RF) and test point TP (RFG).
3. Set disc (YEDS-18) and turn POWER switch on.
4. Adjust RV102 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.
5. Turn POWER switch off.

RF signal waveform



A = 1.3 ± 0.3 (Vp-p)

REFERENCE

Focus/Tracking Gain Adjustments

A frequency responce analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow up (vertical and horizontal) relative to mechanical noise and shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

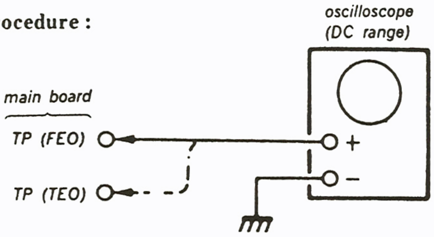
Gain Symptoms	Focus	Tracking
• The time until music starts becomes longer for ■ STOP → ▷ PLAY or automatic selection. (|◀◀, ▶▶| buttons pressed.) (Normally takes about 1 seconds.)	low	low or high
• Music does not start and disc continues to rotate for ■ STOP → ▷ PLAY or automatic selection. (|◀◀, ▶▶| buttons pressed.)	–	low
• Disc table opens shortly after ■ STOP → ▷ PLAY.	low or high	–
• Sound is interrupted during PLAY or time counter display stops progressing.	–	low
• More noise during 2-axis device operation.	high	high

The following is a simple adjustment method.

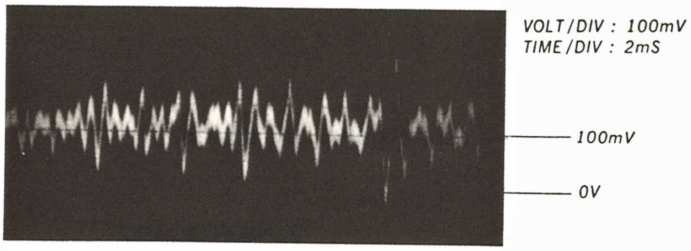
– Primary Adjustment –

Note : Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the position after the primary adjustment are only a little different, return the controls to the original position.

Procedure :

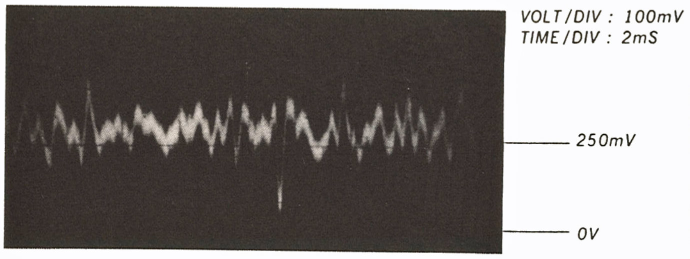

oscilloscope
(DC range)
main board
TP (FEO)
TP (TEO)
+
–

1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2-axis device.)
2. Put the set into test mode.
3. Set disc (YEDS-18) and turn POWER switch on.
4. Connect oscilloscope to main amp board TP (FEO).
5. Adjust RV103 so that the waveform is as shown in the figure below. (focus gain adjustment)

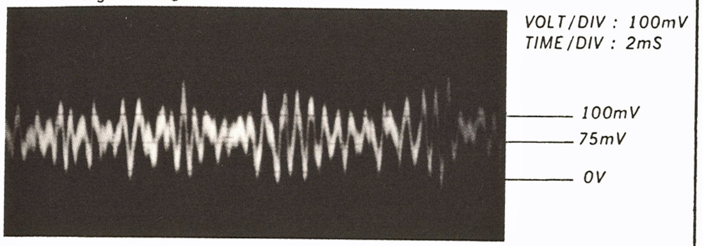


- Incorrent Examples (DC level changes more than on adjusted waveform)

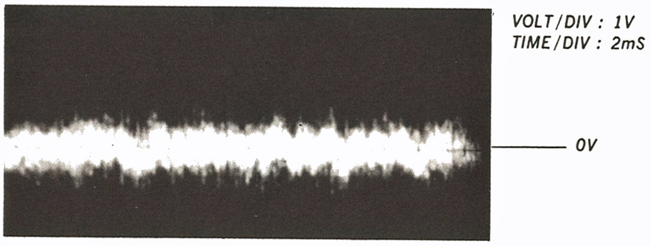
low focus gain



high focus gain

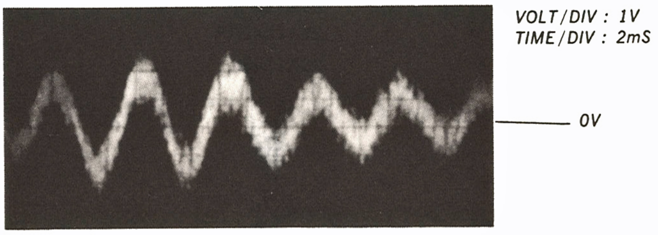


6. Connect oscilloscope to main board TP (TEO).
7. Adjust RV104 so that the waveform is as shown in the figure below. (tracking gain adjustment)
8. Turn POWER switch off.

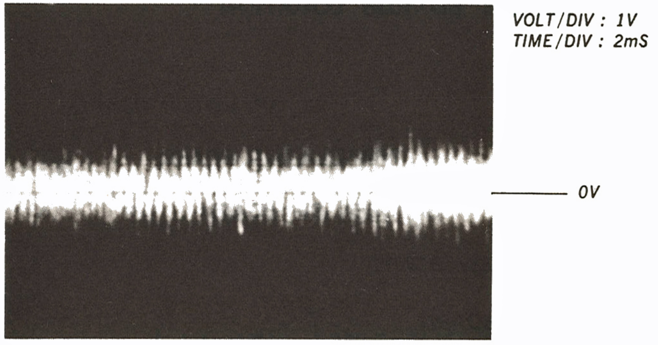


- Incorrect Examples (fundamental wave appears)

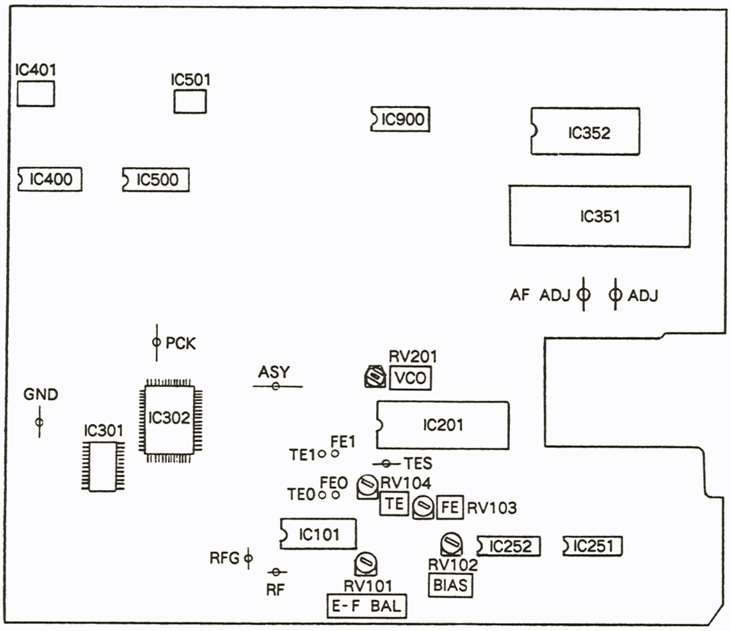
low tracking gain



high tracking gain
higher fundamental wave than for low gain)



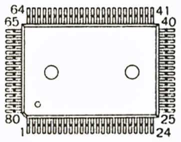
Adjustment Location : main board – component side –


IC401
IC501
IC900
IC352
IC400
IC500
IC351
AF ADJ
ADJ
PCK
RV201
VCO
GND
ASY
IC302
IC201
IC301
TE1
FE1
TES
FEO
TEO
RV104
TE
FE
RV103
IC101
IC252
IC251
RFG
RF
RV101
E-F BAL
RV102
BIAS

SECTION 3
DIAGRAMS

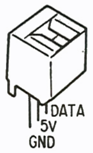
3-1. SEMICONDUCTOR LEAD LAYOUTS

CXD1125Q
CXP50116-101Q

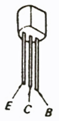

64
41
65
40
80
25
1
24

MARKING SIDE VIEW

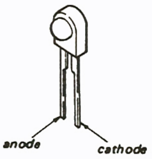
GP1U52XB



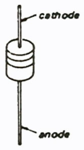
2SB1068K
2SC3622A-K
2SD1388



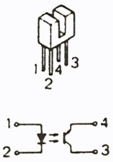
BR4361F


anode
cathode

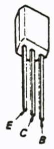
RD4.7ES-B2
RD11ES-B1
1SS202-1


cathode
anode

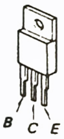
GP1A521



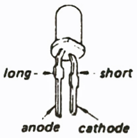
DTC114ES
DTC143TS
2SA1048GR
2SA1348



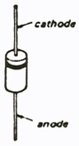
2SB1274



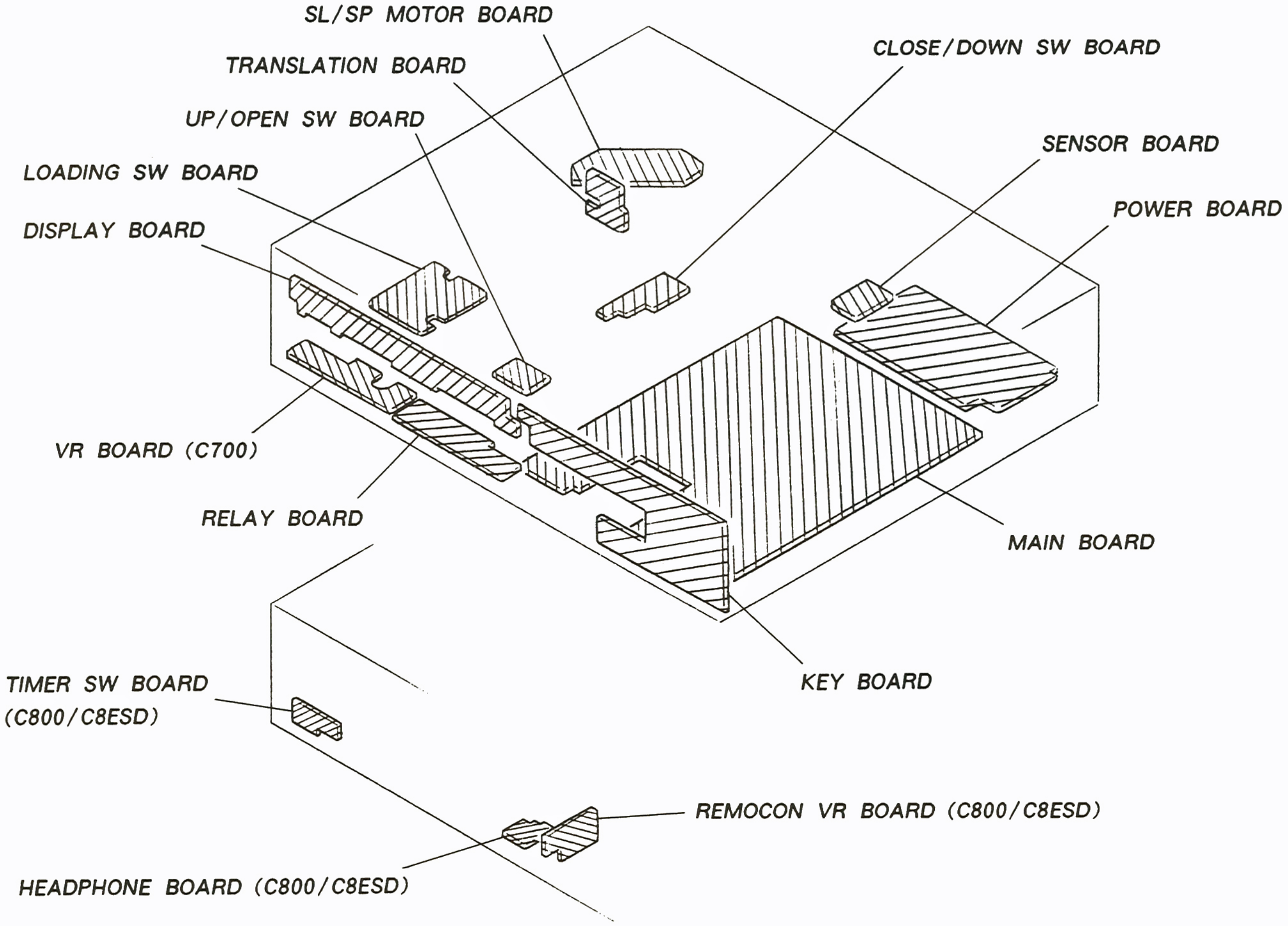
GL3HY8


long
short
anode
cathode

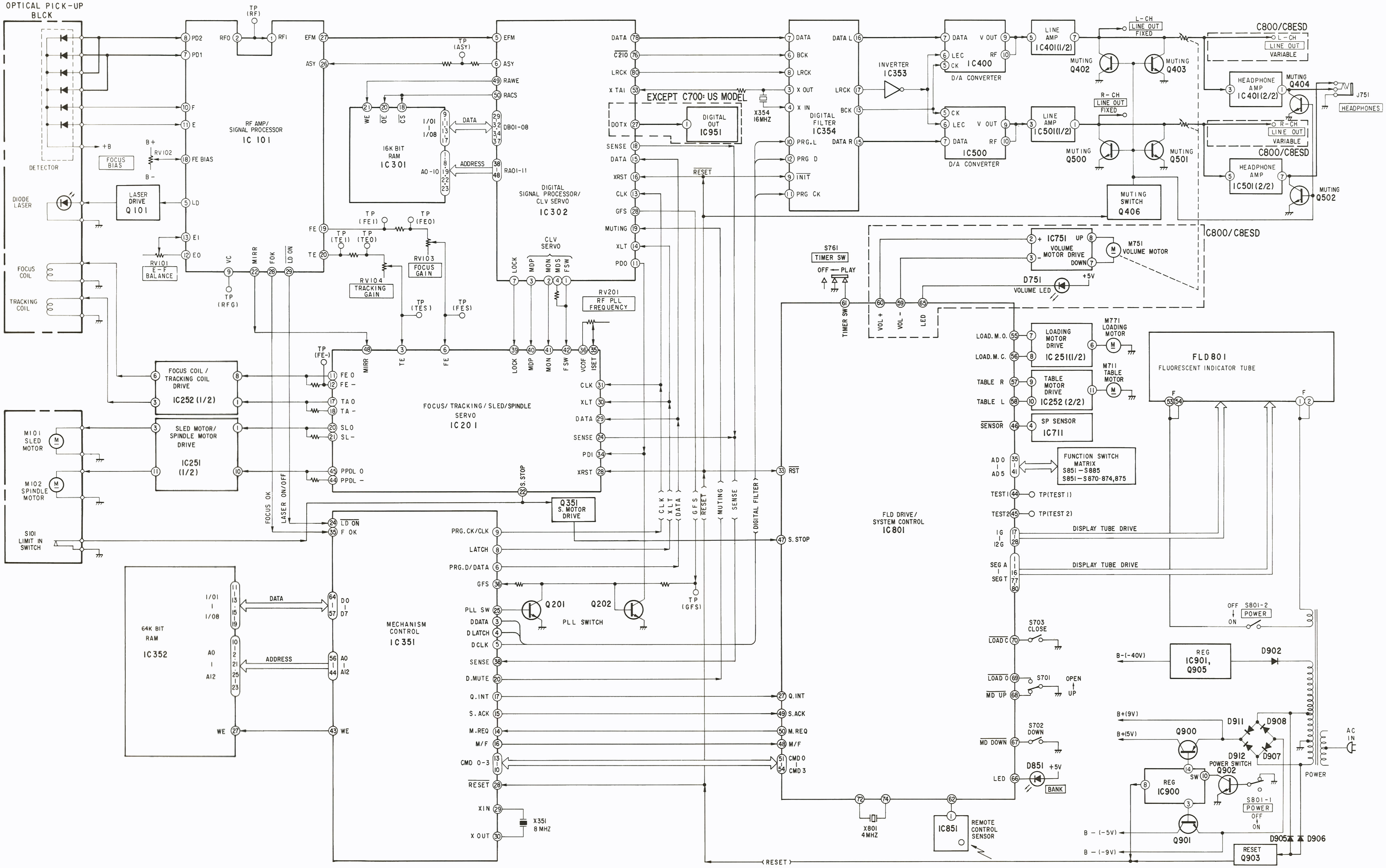
10E2N


cathode
anode

3-2. CIRCUIT BOARDS LOCATION


SL/SP MOTOR BOARD
TRANSLATION BOARD
UP/OPEN SW BOARD
LOADING SW BOARD
DISPLAY BOARD
CLOSE/DOWN SW BOARD
SENSOR BOARD
POWER BOARD
VR BOARD (C700)
RELAY BOARD
MAIN BOARD
KEY BOARD
TIMER SW BOARD (C800/C8ESD)
REMOCON VR BOARD (C800/C8ESD)
HEADPHONE BOARD (C800/C8ESD)

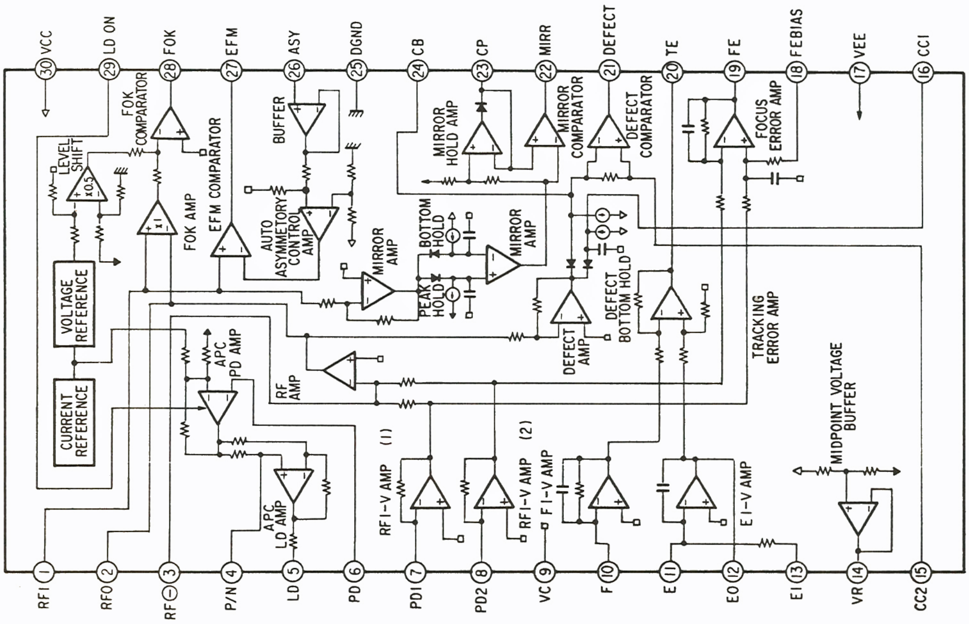
3-3. BLOCK DIAGRAM



OPTICAL PICK-UP BLCK
DETECTOR
DIODE LASER
FOCUS COIL
TRACKING COIL
FOCUS BIAS
RV102
LASER DRIVE Q101
RV101 E-F BALANCE
TP (RF)
TP (RFG)
RF AMP/ SIGNAL PROCESSOR IC 101
PD2
PD1
F
E
FE BIAS
LD
EI
EO
RFO
RFI
EFM
ASY
VC
MIRR
FOK
LD ON
FE
TE
TP (ASY)
TP (FEI)
TP (FEO)
TP (TEI)
TP (TEO)
RV103 FOCUS GAIN
RV104 TRACKING GAIN
TP (TES)
TP (FES)
16K BIT RAM IC301
WE
OE
CS
I/01 – I/08
A0-10
DATA
ADDRESS
DB01-08
RA01-11
RAWE
RACS
DIGITAL SIGNAL PROCESSOR/ CLV SERVO IC302
CLV SERVO
LOCK
MDP
MON
MDS
FSW
RV201 RF PLL FREQUENCY
DATA
C210
LRCK
X TAI
DOTX
SENSE
XRST
CLK
GFS
MUTING
XLT
PDO
EXCEPT C700: US MODEL
DIGITAL OUT IC951
X354 16MHZ
DIGITAL FILTER IC354
DATA L
BCK
LRCK
X OUT
X IN
PRG. L
PRG D
INIT
PRG CK
DATA R
INVERTER IC353
IC400 D/A CONVERTER
IC500 D/A CONVERTER
LEC
CK
V OUT
RF
LINE AMP IC401(1/2)
LINE AMP IC501(1/2)
MUTING Q402
MUTING Q403
MUTING Q500
MUTING Q501
L-CH LINE OUT FIXED
R-CH LINE OUT FIXED
C800/C8ESD
L-CH LINE OUT VARIABLE
R-CH LINE OUT VARIABLE
HEADPHONE AMP IC401(2/2)
HEADPHONE AMP IC501(2/2)
MUTING Q404
MUTING Q502
J751 HEADPHONES
MUTING SWITCH Q406
RESET
IC751 VOLUME MOTOR DRIVE
UP
DOWN
M751 VOLUME MOTOR
D751 VOLUME LED
+5V
S761 TIMER SW
OFF — PLAY
TIMER SW
VOL +
VOL -
LED
TP (FE-)
FE O
FE -
TA O
TA -
SLO
SL -
PPDL O
PPDL -
FOCUS/ TRACKING/ SLED/ SPINDLE SERVO IC201
VCOF
ISET
CLK
XLT
DATA
SENSE
PDI
XRST
S.STOP
FOCUS COIL / TRACKING COIL DRIVE IC252 (1/2)
SLED MOTOR/ SPINDLE MOTOR DRIVE IC251 (1/2)
M101 SLED MOTOR
M102 SPINDLE MOTOR
S101 LIMIT IN SWITCH
FOCUS OK
LASER ON/OFF
Q351 S. MOTOR DRIVE
LD ON
F OK
64K BIT RAM IC352
I/01 – I/08
A0 – A12
DATA
ADDRESS
D0 – D7
A0 – A12
WE
MECHANISM CONTROL IC351
PRG.CK/CLK
LATCH
PRG.D/DATA
GFS
PLL SW
DDATA
DLATCH
DCLK
SENSE
D.MUTE
Q.INT
S.ACK
M.REQ
M/F
CMD 0-3
RESET
XIN
X OUT
X351 8 MHZ
Q201
Q202
PLL SWITCH
TP (GFS)
CLK
XLT
DATA
GFS
RESET
MUTING
SENSE
DIGITAL FILTER
FLD DRIVE/ SYSTEM CONTROL IC801
RST
S.STOP
Q.INT
S.ACK
M.REQ
M/F
CMD 0 – CMD 3
LOAD. M. O.
LOAD. M. C.
TABLE R
TABLE L
SENSOR
LOADING MOTOR DRIVE IC251(1/2)
M771 LOADING MOTOR
TABLE MOTOR DRIVE IC252 (2/2)
M711 TABLE MOTOR
SP SENSOR IC711
AD 0 – AD 5
FUNCTION SWITCH MATRIX S851 – S885 S851 – S870·874,875
TEST 1
TEST 2
TP(TEST 1)
TP(TEST 2)
1G – 12G
DISPLAY TUBE DRIVE
SEG A – SEG T
DISPLAY TUBE DRIVE
FLD801 FLUORESCENT INDICATOR TUBE
F
S703 CLOSE
LOAD C
LOAD O
S701 OPEN
MD UP
UP
S702 DOWN
MD DOWN
LED
D851 +5V
BANK
X801 4MHZ
IC851 REMOTE CONTROL SENSOR
RESET
OFF S801-2 POWER ON
B-(-40V)
REG IC901, Q905
D902
B+(9V)
B+(5V)
Q900
D911
D908
D912
D907
POWER SWITCH Q902
REG IC900
SW
S801-1 POWER OFF ON
Q901
B - (-5V)
B - (-9V)
RESET Q903
D905
D906
AC IN
POWER

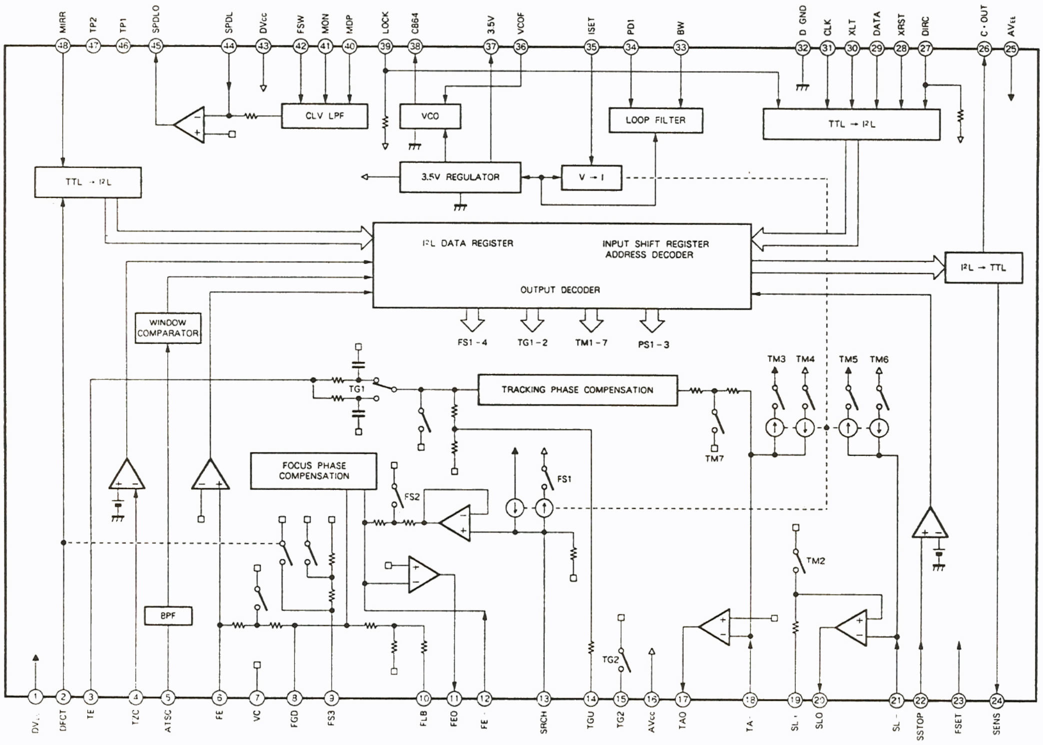
3-4. IC BLOCK DIAGRAMS

- IC101 CXA1081S



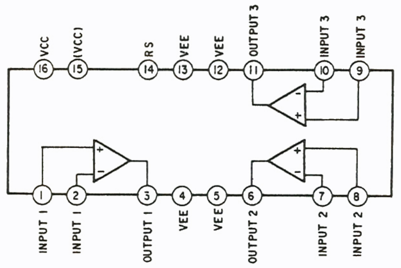
VCC 30
LD ON 29
FOK 28
EFM 27
ASY 26
DGND 25
CB 24
CP 23
MIRR 22
DEFECT 21
TE 20
FE 19
FEBIAS 18
VEE 17
CC1 16
FOK COMPARATOR
LEVEL SHIFT
X0.5
BUFFER
MIRROR HOLD AMP
MIRROR COMPARATOR
DEFECT COMPARATOR
FOCUS ERROR AMP
FOK AMP
EFM COMPARATOR
AUTO ASYMMETORY CONTROL AMP
MIRROR AMP
BOTTOM HOLD
PEAK HOLD
MIRROR AMP
DEFECT AMP
DEFECT BOTTOM HOLD
TRACKING ERROR AMP
VOLTAGE REFERENCE
CURRENT REFERENCE
APC PD AMP
RF AMP
APC LD AMP
RFI-V AMP (1)
RFI-V AMP (2)
F I-V AMP
E I-V AMP
MIDPOINT VOLTAGE BUFFER
RFI 1
RFO 2
RF⊖ 3
P/N 4
LD 5
PD 6
PD1 7
PD2 8
VC 9
F 10
E 11
EO 12
EI 13
VR 14
CC2 15

- IC201 CXA1182S

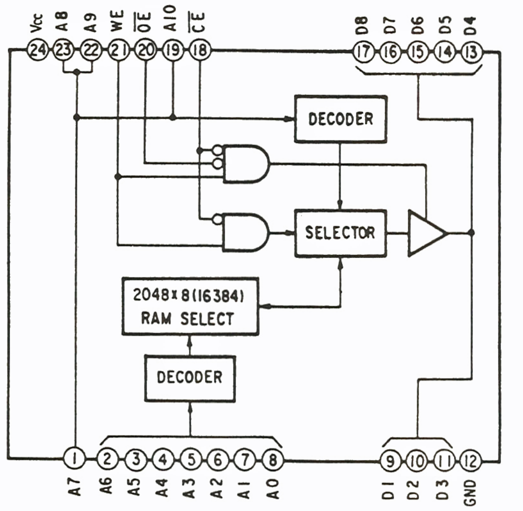


MIRR 48
TP2 47
TP1 46
SPDLO 45
SPDL 44
DVcc 43
FSW 42
MON 41
MDP 40
LOCK 39
C864 38
3.5V 37
VCOF 36
ISET 35
PD1 34
BW 33
D GND 32
CLK 31
XLT 30
DATA 29
XRST 28
DIRC 27
C・OUT 26
AVEE 25
CLV LPF
VCO
LOOP FILTER
TTL → I²L
TTL → I²L
3.5V REGULATOR
V → I
I²L DATA REGISTER
INPUT SHIFT REGISTER
ADDRESS DECODER
OUTPUT DECODER
I²L → TTL
FS1 - 4
TG1 - 2
TM1 - 7
PS1 - 3
WINDOW COMPARATOR
TG1
TRACKING PHASE COMPENSATION
TM3
TM4
TM5
TM6
TM7
FOCUS PHASE COMPENSATION
FS2
FS1
TM2
BPF
TG2
DV
DFCT 2
TE 3
TZC 4
ATSC 5
FE 6
VC 7
FGD 8
FS3 9
FLB 10
FEO 11
FE - 12
SRCH 13
TGU 14
TG2 15
AVcc 16
TAO 17
TA - 18
SL + 19
SLO 20
SL - 21
SSTOP 22
FSET 23
SENS 24

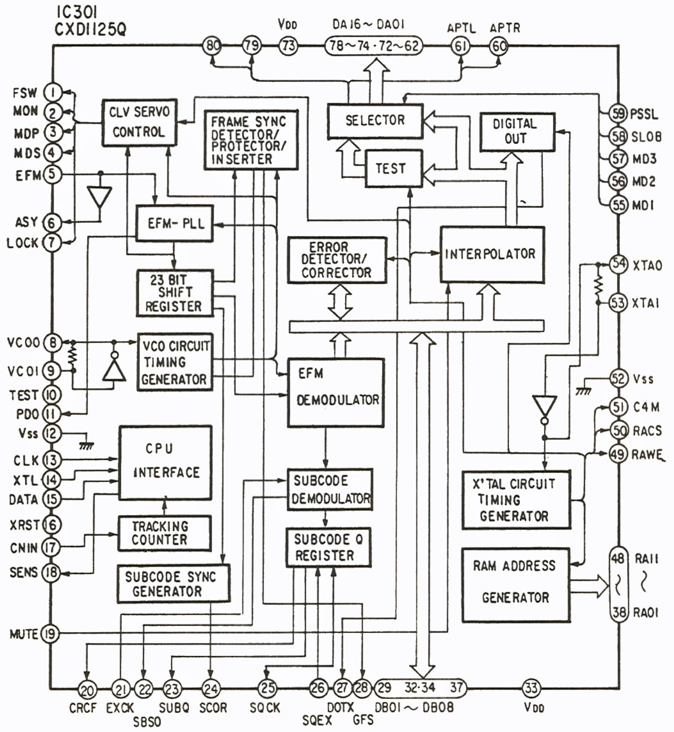
- IC251, 252 CXA1291P


VCC
(VCC)
RS
VEE
VEE
OUTPUT 3
INPUT 3
INPUT 3
INPUT 1
INPUT 1
OUTPUT 1
VEE
VEE
OUTPUT 2
INPUT 2
INPUT 2

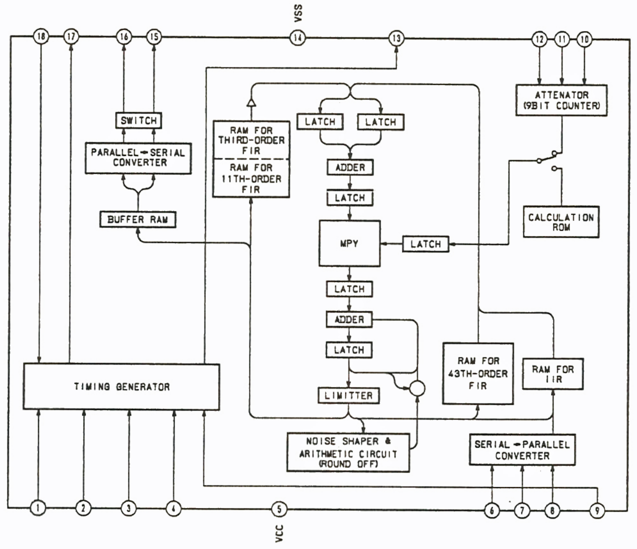
- IC301 LC9600PM-144


Vcc
A8
A9
WE
OE
A10
CE
D8
D7
D6
D5
D4
DECODER
SELECTOR
2048×8(16384)
RAM SELECT
DECODER
A7
A6
A5
A4
A3
A2
A1
A0
D1
D2
D3
GND

- IC302 CXD1125Q


IC301
CXD1125Q
VDD
DA16～DA01
78～74·72～62
APTL
APTR
FSW
MON
MDP
MDS
EFM
ASY
LOCK
VCO0
VCO1
TEST
PDO
Vss
CLK
XTL
DATA
XRST
CNIN
SENS
MUTE
CLV SERVO CONTROL
FRAME SYNC DETECTOR/ PROTECTOR/ INSERTER
SELECTOR
TEST
DIGITAL OUT
EFM-PLL
ERROR DETECTOR/ CORRECTOR
INTERPOLATOR
23 BIT SHIFT REGISTER
VCO CIRCUIT TIMING GENERATOR
EFM DEMODULATOR
CPU INTERFACE
TRACKING COUNTER
SUBCODE SYNC GENERATOR
SUBCODE DEMODULATOR
SUBCODE Q REGISTER
X'TAL CIRCUIT TIMING GENERATOR
RAM ADDRESS GENERATOR
PSSL
SLOB
MD3
MD2
MD1
XTAO
XTAI
Vss
C4M
RACS
RAWE
RA11
RA01
CRCF
EXCK
SBSO
SUBQ
SCOR
SQCK
SQEX
DOTX
GFS
DB01～DB08
VDD

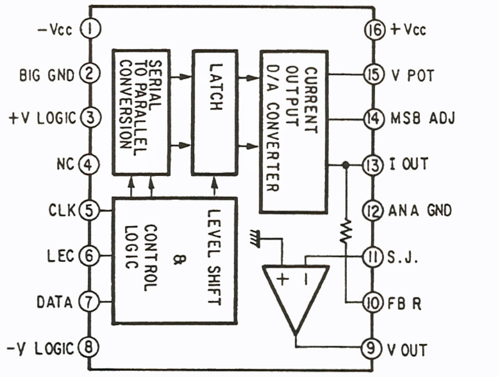
- IC354 CXD2551P


VSS
SWITCH
PARALLEL→SERIAL CONVERTER
BUFFER RAM
RAM FOR THIRD-ORDER FIR
RAM FOR 11TH-ORDER FIR
LATCH
LATCH
ADDER
LATCH
MPY
LATCH
LATCH
ADDER
LATCH
LIMITTER
NOISE SHAPER & ARITHMETIC CIRCUIT (ROUND OFF)
ATTENATOR (9BIT COUNTER)
CALCULATION ROM
RAM FOR 43TH-ORDER FIR
RAM FOR IIR
SERIAL→PARALLEL CONVERTER
TIMING GENERATOR
VCC

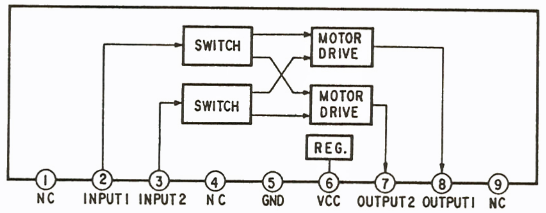
- IC400, 500

AD1860N-K (18 bit) : CDP-C8ESD/C800

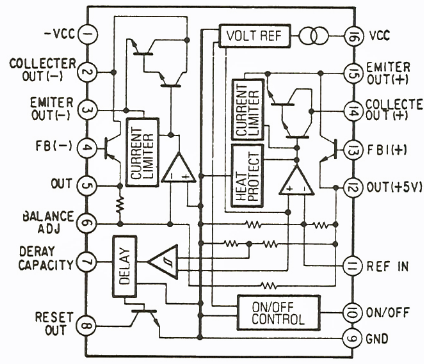
PCM56P-S/JS (16 bit) : CDP-C700


-Vcc
BIG GND
+V LOGIC
NC
CLK
LEC
DATA
-V LOGIC
SERIAL TO PARALLEL CONVERSION
LATCH
CURRENT OUTPUT D/A CONVERTER
LEVEL SHIFT & CONTROL LOGIC
+Vcc
V POT
MSB ADJ
I OUT
ANA GND
S.J.
FB R
V OUT

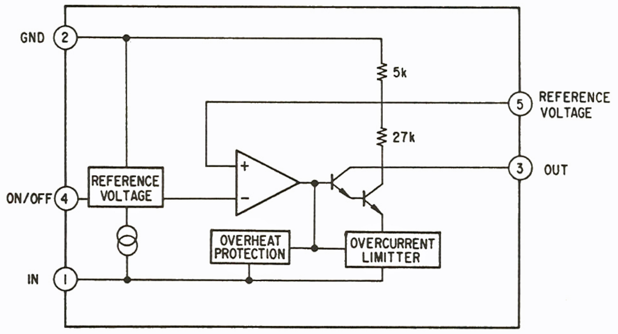
- IC751 BA6208


SWITCH
SWITCH
MOTOR DRIVE
MOTOR DRIVE
REG.
NC
INPUT1
INPUT2
NC
GND
VCC
OUTPUT2
OUTPUT1
NC

- IC900 M5290P-16


-VCC
COLLECTER OUT(-)
EMITER OUT(-)
FB(-)
OUT
BALANCE ADJ
DERAY CAPACITY
RESET OUT
CURRENT LIMITER
DELAY
VOLT REF
CURRENT LIMITER
HEAT PROTECT
ON/OFF CONTROL
VCC
EMITER OUT(+)
COLLECTER OUT(+)
FBI(+)
OUT(+5V)
REF IN
ON/OFF
GND

- IC901 M5293L


GND
ON/OFF
IN
5k
27k
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
REFERENCE VOLTAGE
OUT

3-5. PRINTED WIRING BOARDS

- See page 10 for Semiconductor Lead Layouts and Circuit Boards Location.

- Semiconductor Location

Ref. No.	Location
D101	F-16
D751	D-28
D851	B-29
D900	G-9
D901	D-11
D902	D-10
D903	F-8
D904	D-9
D905	E-8
D906	D-9
D907	D-10
D908	D-9
D909	D-9
D910	D-9
D911	D-9
D912	D-9
D913	E-11
D914	F-8
IC101	E-15
IC201	F-13
IC251	H-15
IC252	G-15
IC301	B-14
IC302	C-13
IC351	H-11
IC352	H-10
IC353	A-11
IC354	C-11
IC400	A-10
IC401	A-9
IC500	C-10
IC501	C-9
IC711	C-18
IC751	E-28
IC801	G-26
IC851	B-30
IC900	F-10
IC901	E-10
IC951	B-7
Q101	F-16
Q201	F-12
Q202	G-12
Q351	G-15
Q402	B-10
Q403	B-9
Q404	B-8
Q406	D-9
Q500	B-10
Q501	C-9
Q502	C-8
Q900	G-9
Q901	F-10
Q902	F-9
Q903	G-9
Q905	F-11

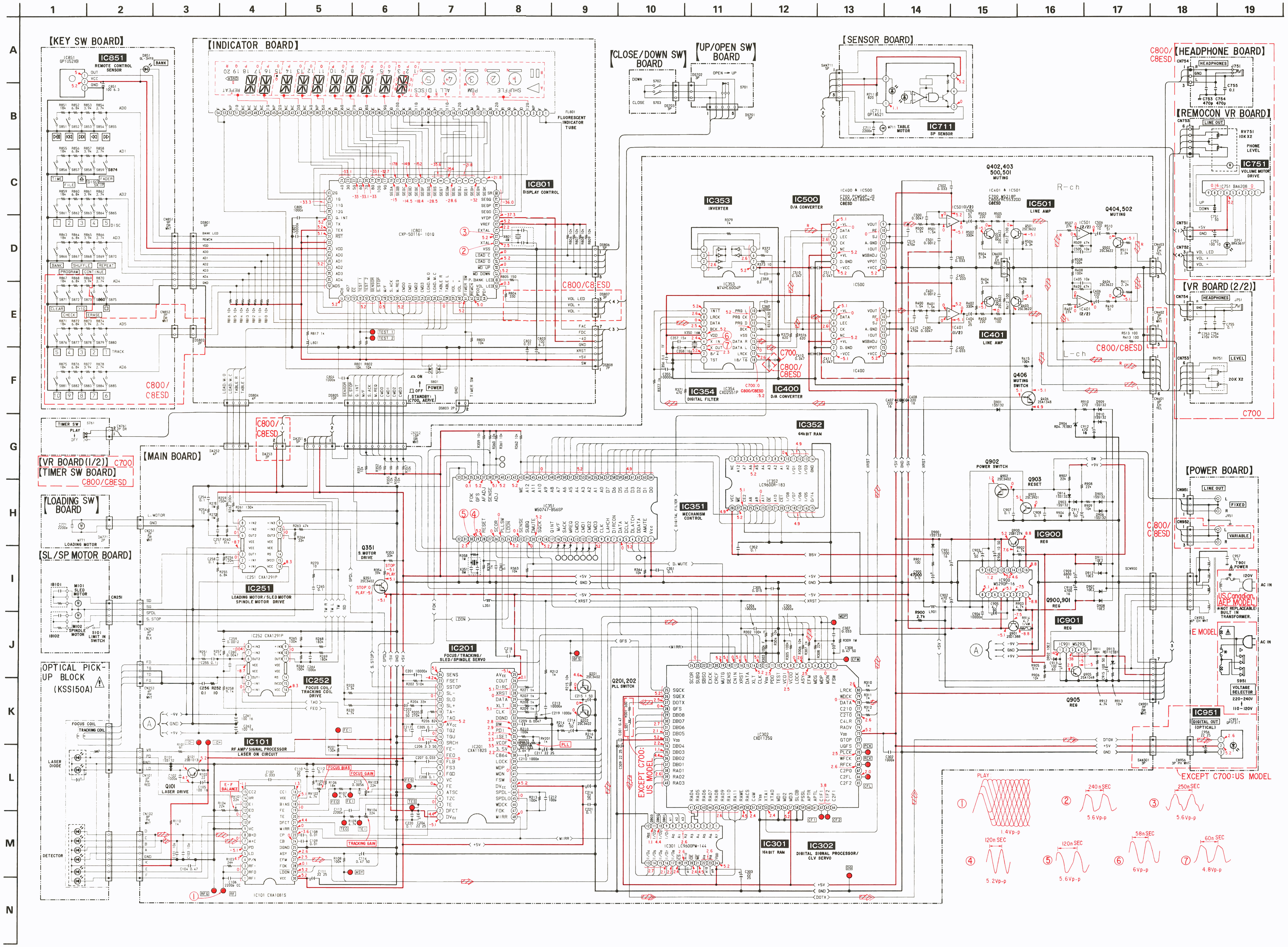
Note:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
A B C D E F G H I J
[POWER BOARD]
US, CANADIAN, AEP MODEL
E MODEL
EXCEPT C700 US MODEL
C800/C8ESD
LINE OUT
DIGITAL OUT
AC IN
VOLTAGE SELECTOR
110-120V
220-240V
[MAIN BOARD]
C700 US MODEL
EXCEPT C700 US MODEL
(TO CHASSIS)
[SENSOR BOARD]
TABLE MOTOR
[SL/SP MOTOR BOARD]
SPINDLE MOTOR
[CLOSE/DOWN SW BOARD]
OPTICAL PICKUP BLOCK (KSS-150A)
[TRANSLATION BOARD]
JUMPER FLEXIBLE BOARD
[UP/OPEN SW BOARD]
[LOADING SW BOARD]
LOADING MOTOR
[KEY SW BOARD]
C800/C8ESD
[REMOCON VR BOARD]
[HEADPHONE BOARD]
[TIMER SW BOARD]
INCLUDED RV751
VOLUME MOTOR
FL801 FLUORESCENT INDICATOR TUBE
[INDICATOR BOARD]
POWER
[TRANSLATION BOARD]
C700
[VR BOARD]
HEADPHONES
PLAY OFF

3-6. SCHEMATIC DIAGRAM

• See page 13 for IC block diagram.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
A
B
C
D
E
F
G
H
I
J
K
L
M
N
[KEY SW BOARD]
IC851 REMOTE CONTROL SENSOR
[INDICATOR BOARD]
FL801 FLUORESCENT INDICATOR TUBE
IC801 DISPLAY CONTROL
[CLOSE/DOWN SW] BOARD
[UP/OPEN SW] BOARD
[SENSOR BOARD]
IC711 SP SENSOR
TABLE MOTOR
[HEADPHONE BOARD]
[REMOCON VR BOARD]
IC751 VOLUME MOTOR DRIVE
[VR BOARD (2/2)]
IC353 INVERTER
IC500 D/A CONVERTER
IC501 LINE AMP
IC401 LINE AMP
Q402,403 500,501 MUTING
Q404,502 MUTING
Q406 MUTING SWITCH
R-ch
L-ch
IC354 DIGITAL FILTER
IC400 D/A CONVERTER
IC352 64k BIT RAM
IC351 MECHANISM CONTROL
[POWER BOARD]
Q902 POWER SWITCH
Q903 RESET
IC900 REG
Q900,901 REG
IC901 REG
Q905 REG
IC951 DIGITAL OUT
[VR BOARD (1/2)] C700
[TIMER SW BOARD] C800/C8ESD
[LOADING SW] BOARD
[SL/SP MOTOR BOARD]
M101 SLED MOTOR
M102 SPINDLE MOTOR
S101 LIMIT IN SWITCH
[MAIN BOARD]
IC251 LOADING MOTOR/SLED MOTOR SPINDLE MOTOR DRIVE
Q351 S.MOTOR DRIVE
IC252 FOCUS COIL/TRACKING COIL DRIVE
IC201 FOCUS/TRACKING/SLED/SPINDLE SERVO
IC101 RF AMP/SIGNAL PROCESSOR LASER ON CIRCUIT
Q101 LASER DRIVE
OPTICAL PICK-UP BLOCK (KSS150A)
LASER DIODE
DETECTOR
FOCUS BIAS
FOCUS GAIN
TRACKING GAIN
E-F BALANCE
Q201,202 PLL SWITCH
EXCEPT C700: US MODEL
IC302 DIGITAL SIGNAL PROCESSOR/CLV SERVO
IC301 16k BIT RAM
US,Canadian, AEP MODEL
E MODEL
S951 VOLTAGE SELECTOR
T901 POWER TRANSFORMER
AC IN
EXCEPT C700: US MODEL
C800/C8ESD
PLAY
①
1.4Vp-p
② 240nSEC 5.6Vp-p
③ 250nSEC 5.6Vp-p
④ 120nSEC 5.2Vp-p
⑤ 120nSEC 5.6Vp-p
⑥ 58nSEC 6Vp-p
⑦ 60nSEC 4.8Vp-p

Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line
- ╍ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
- Voltages are taken with a VOM (Input impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇨ : digital out

SECTION 4
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:

  (RED) ... KNOB, BALANCE (WHITE)

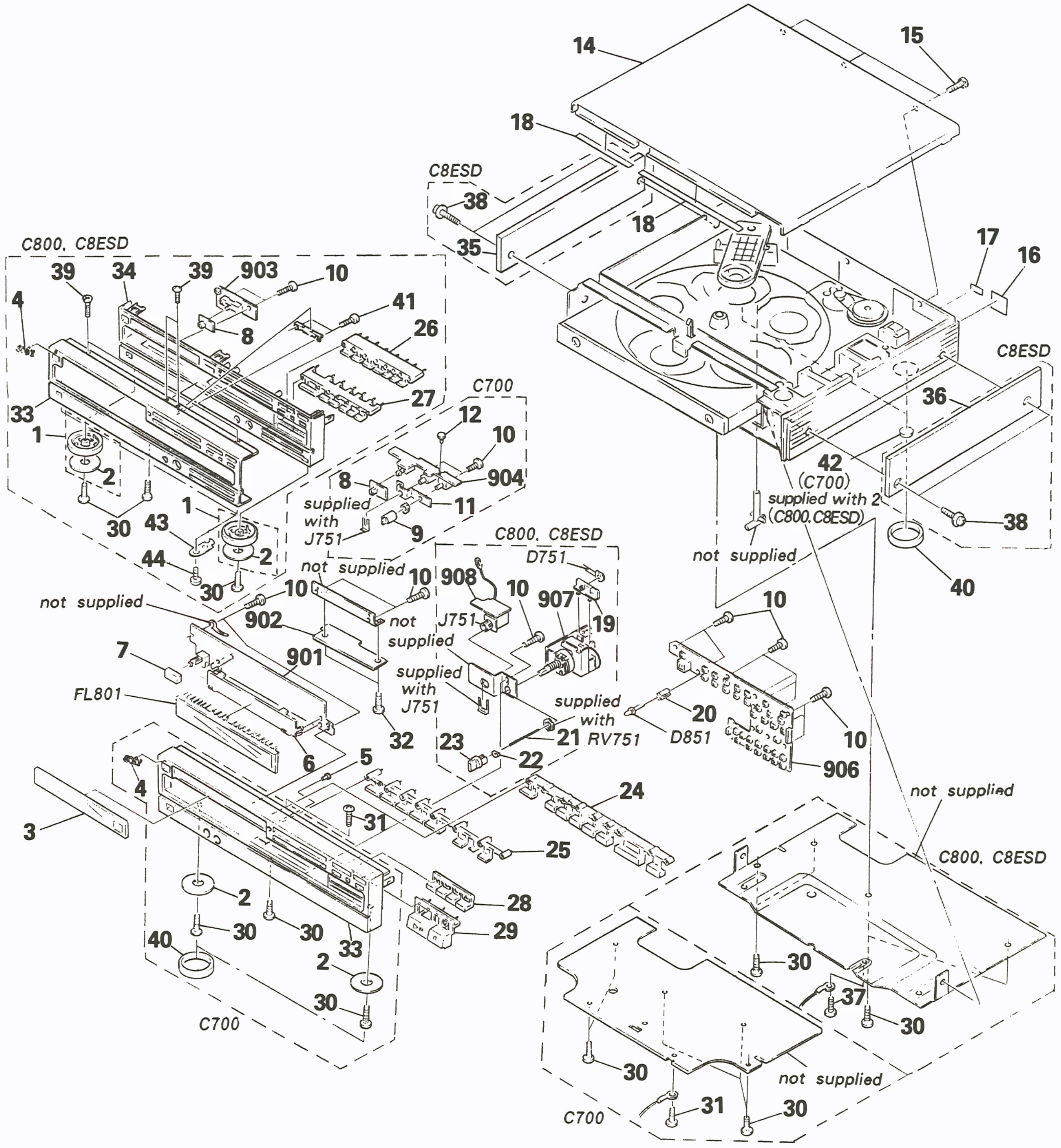
  ↑ ↑

  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

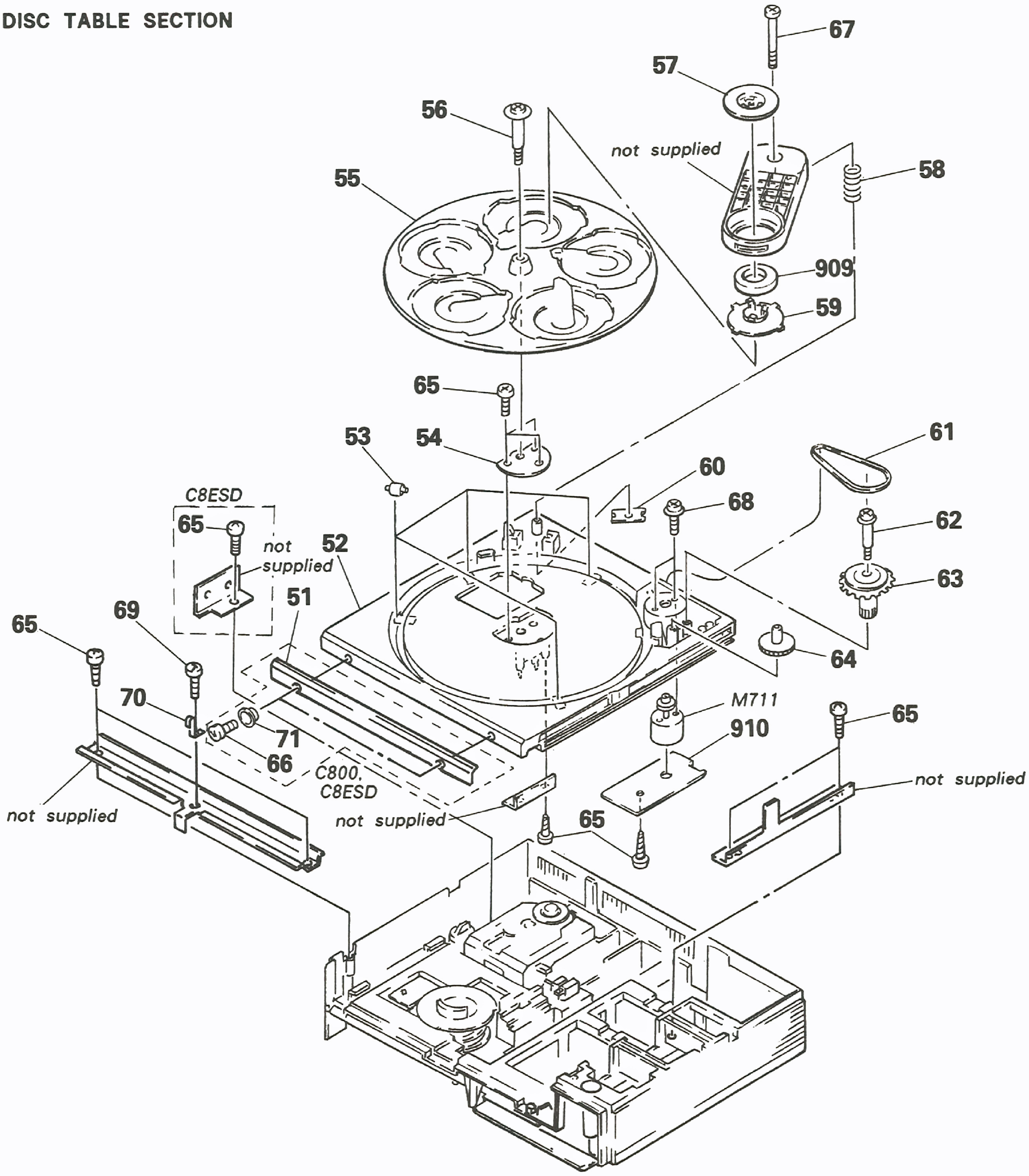
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CABINET SECTION


14
15
18
C8ESD
38
35
18
17
16
C800, C8ESD
39
34
39
903
10
4
41
8
26
27
33
C700
12
10
1
2
904
8
11
supplied with J751
9
30
43
1
2
44
30
not supplied
10
10
908
10
907
19
C800, C8ESD
D751
J751
not supplied
902
901
7
FL801
supplied with J751
supplied with RV751
21
20
D851
10
906
6
5
32
23
22
24
3
4
31
25
28
29
2
30
30
33
40
2
30
C700
42
(C700)
supplied with 2
(C800,C8ESD)
not supplied
36
C8ESD
38
40
not supplied
C800, C8ESD
30
37
30
30
not supplied
31
30
C700

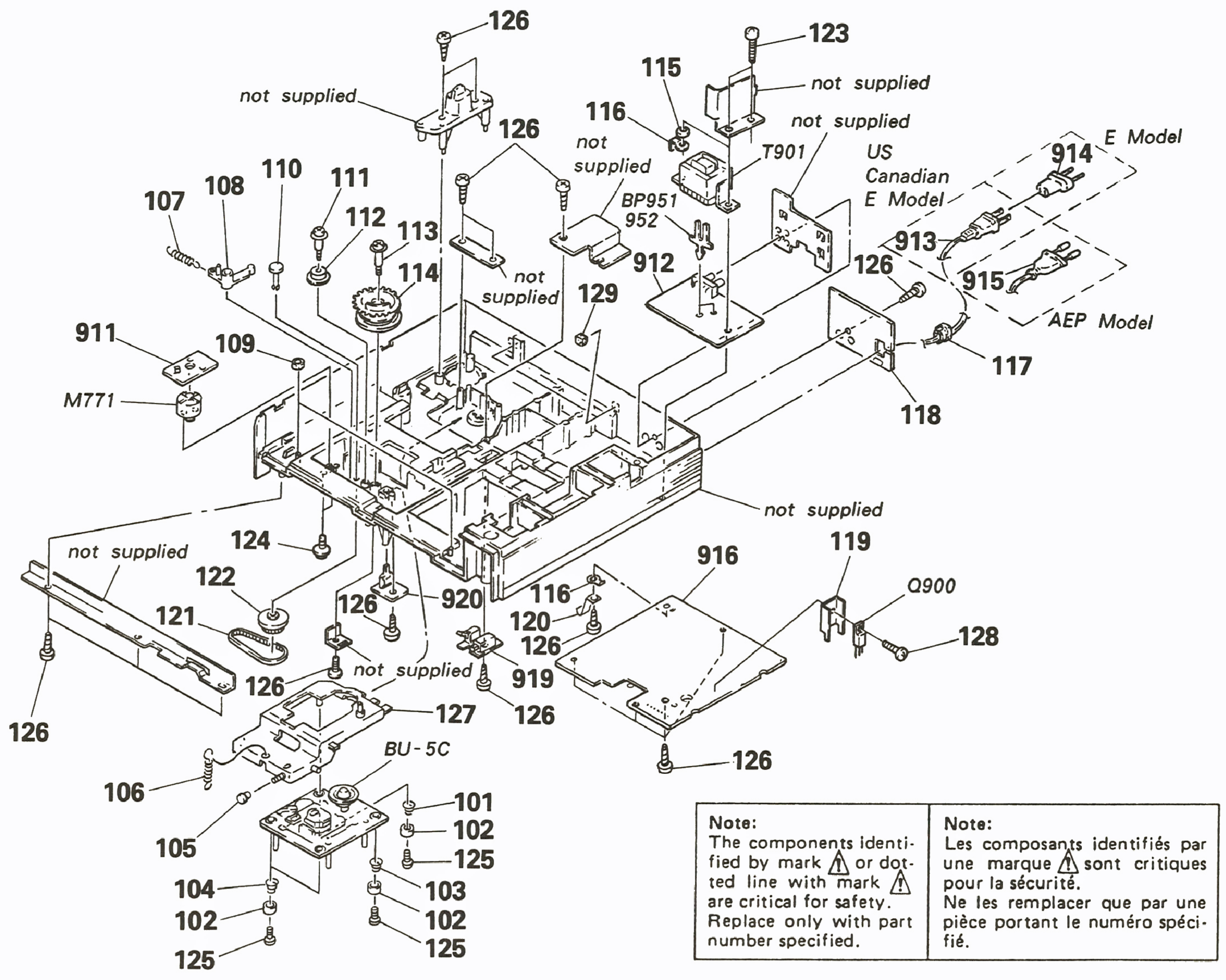
No.	Part No.	Description	Remarks
1	X-4922-508-1	(C800)....FOOT ASSY	
	X-4922-544-1	(C8ESD)...FOOT ASSY	
2	4-922-915-01	(C800,C8ESD)...FOOT (FELT)	
	4-926-391-01	(C700).........FOOT (FELT)	
3	4-930-584-01	WINDOW	
4	4-908-848-01	(C800,C8ESD)...EMBLEM, SONY	
	4-925-334-11	(C700).........EMBLEM (5-A), SONY	
5	4-925-327-01	INDICATOR	
6	*4-924-481-01	BRACKET (FL)	
7	4-922-921-01	BUTTON (POWER)	
8	4-922-518-01	KNOB (TIMER)	
9	4-922-531-11	(C700)...KNOB (A TYPE), LOV	
10	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
11	*4-926-390-01	(C700)...BRACKET (HEAD PHONE)	
12	*2-382-416-01	(C700)...SUPPORT, PC	
14	4-930-583-01	(C700,C800)...CASE	
	4-930-583-12	(C8ESD).......CASE	
15	4-909-982-31	SCREW, TAPPING	
16	*3-704-217-01	(US)...LABEL, CERTIFICATION	
17	*4-885-838-00	(AEP,E)...LABEL, CLASS1	
18	3-831-441-XX	CUSHION, PANEL	
19	*4-922-980-01	(C800,C8ESD)...HOLDER (LED)	
20	*4-923-532-01	SPACER, LED	
21	4-922-979-01	(C800,C8ESD)...INDICATOR	
22	4-922-978-01	(C800,C8ESD)...HOLDER (FIBER)	
23	4-922-977-01	(C800,C8ESD)...KNOB (HP)	
24	4-930-578-01	BUTTON (A)	
25	4-930-579-01	BUTTON (B)	
26	4-934-303-01	BUTTON (E)	
27	4-934-304-01	BUTTON (F)	
28	4-930-580-01	BUTTON (C)	
29	4-930-581-01	BUTTON (D)	
30	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
31	3-703-685-21	(C800,C8ESD)...SCREW (+BV 3X8)	
	7-685-870-01	(C700).........SCREW +BVTT 3X5 (S)	
32	7-682-548-04	SCREW +BVTT 3X8 (S)	
33	4-930-577-01	(C700:US).........PANEL, FRONT	
	4-930-577-11	(C700:AEP,E)......PANEL, FRONT	
	4-930-577-21	(C700:Canadian)...PANEL, FRONT	
	4-930-599-01	(C800)............PANEL, FRONT	
	4-930-599-11	(C8ESD)...........PANEL, FRONT	
34	*4-930-598-01	(C800,C8ESD)...PANEL (SUB)	
35	X-4924-444-1	(C8ESD)...PANEL (LEFT) ASSY, SIDE	
36	X-4924-445-1	(C8ESD)...PANEL (RIGHT) ASSY, SIDE	
37	7-682-547-04	(C800,C8ESD)...SCREW +BVTT 3X6 (S)	
38	3-720-650-01	(C8ESD)...SCREW (3X25), (+) BV	
39	7-621-559-30	SCREW +K 2.6X5	
40	4-926-398-01	(C8ESD,C700:Canadian,AEP,E) ...PLATE, ORNAMENTAL	
41	4-928-635-01	SCREW +BV (2.6X8) TAPPING	
42	2-352-555-01	CUSHION	
43	*4-934-322-01	(C800,C8ESD)...PLATE, GROUND	
44	7-685-645-79	(C800,C8ESD)...SCREW +BVTP 3X6 TYPE2 SLIT	
901	*1-631-036-11	PC BOARD, INDICATOR	
902	*1-631-035-11	PC BOARD, TRANSLATION	
903	*1-631-044-11	(C800,C8ESD)...PC BOARD, TIMER SW	
904	1-631-042-11	(C700)....PC BOARD, VR	
906	*1-631-046-11	PC BOARD, KEY SW	
907	*1-631-043-11	(C800,C8ESD)...PC BOARD, REMOCON VR	
908	*1-631-045-11	(C800,C8ESD)...PC BOARD, HEADPHONE	
D751	8-719-970-49	(C800,C8ESD)...DIODE BR4361F	
D851	8-719-938-68	DIODE GL3HY8	
FL801	1-519-450-11	INDICATOR TUBE, FLUORESCENT	
J751	1-568-519-21	JACK, LARGE TYPE (HEADPHONES)	

5-2. DISC TABLE SECTION


67
57
56
not supplied
58
55
909
59
65
53
54
61
60
C8ESD
65
68
not supplied
52
62
63
51
69
65
64
70
M711
910
65
71
66
C800,
C8ESD
not supplied
not supplied
65
not supplied

No.	Part No.	Description	Remarks
51	4-934-305-01	(C800,C8ESD)...PANEL (TABLE)	
52	4-926-381-01	(C700).........TABLE (A), DISK	
	4-934-309-01	(C800,C8ESD)...TABLE (A), DISK	
53	*X-4924-409-1	SHAFT (ROLLER B) ASSY	
54	*4-926-387-01	BRACKET (CENTER SHAFT)	
55	4-926-383-11	TABLE (B), DISK	
56	4-926-384-01	SCREW, STEP	
57	4-921-029-01	YOKE, CHUCKING	
58	4-926-395-01	SPRING, COMPRESSION	
59	4-921-022-01	PULLEY, CHUCKING	
60	*4-926-388-01	BRACKET (ADJUSTMENT)	
61	4-934-325-01	BELT	
62	7-685-152-19	SCREW, STEP	
63	4-926-385-01	GEAR (C)	
64	4-926-386-01	GEAR (B)	
65	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
66	7-683-404-04	(C800,C8ESD)...BOLT, HEXAGON SOCKET 3X8	
67	7-682-554-01	SCREW +B 3X25	
68	7-628-254-00	+PSW, 2.6X5	
69	7-685-870-01	SCREW +BVTT 3X5 (S)	
70	*4-934-326-01	PLATE (B), GROUND	
71	4-934-307-01	(C800,C8ESD)...ESCUTCHEON	
909	1-452-340-21	MAGNET	
910	*1-631-038-11	PC BOARD, SENSOR	
M711	A-4604-232-A	MOTOR ASSY, ROTARY	

5-3. CHASSIS SECTION

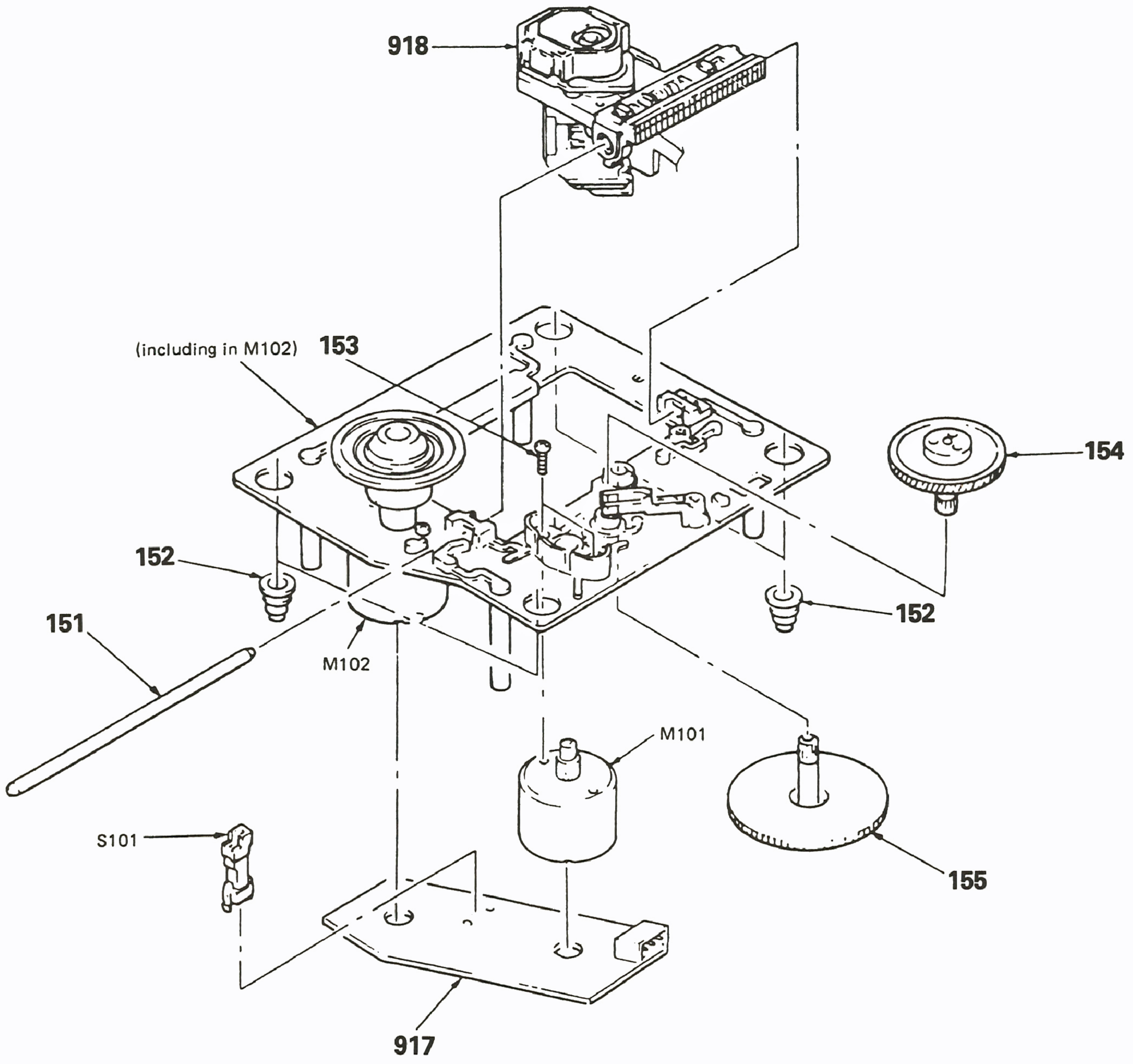

126
123
115
not supplied
116
not supplied
not supplied
126
T901
US
Canadian
E Model
914
E Model
107
108
110
111
112
113
114
BP951
952
912
913
126
915
not supplied
129
AEP Model
911
109
M771
117
118
not supplied
not supplied
124
122
121
126
920
116
120
126
919
126
not supplied
916
119
Q900
128
126
127
126
BU-5C
106
105
104
102
125
101
102
125
103
102
125
126

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
101	4-917-541-01	SPRING (B)	
102	4-917-508-01	HOLDER, SP	
103	4-918-669-01	SPRING (W)	
104	4-917-507-01	SPRING (H)	
105	4-927-631-01	ROLLER (L)	
106	4-926-394-01	SPRING, TENSION	
107	4-924-412-01	SPRING (B), TENSION	
108	4-917-519-01	LEVER, SET	
109	*4-930-520-01	CUSHION	
110	4-924-425-01	GEAR (LOADING B)	
111	4-926-320-01	SCREW (B), STEP	
112	4-924-426-01	GEAR (LOADING C)	
113	7-685-666-79	SCREW, STEP	
114	4-930-508-01	GEAR (LOADING A)	
115	3-701-418-00	WASHER, SPECIAL	
116	4-870-539-00	PLATE, GROUND	
117	*3-703-244-00	(US,Canadian,AEP)...BUSHING (2104), CORD	
	*3-703-571-11	(E)..................BUSHING (4516)	
118	*4-930-538-01	(C700:US).........PLATE, INDICATION	
	*4-930-539-01	(C700:Canadian)...PLATE, INDICATION	
	*4-930-540-01	(C700:AEP)........PLATE, INDICATION	
	*4-930-541-01	(C700:E)..........PLATE, INDICATION	
	*4-930-575-01	(C800)............PLATE, INDICATION	
	*4-930-576-01	(C8ESD)...........PLATE, INDICATION	

No.	Part No.	Description	Remarks
119	4-902-345-01	HEAT SINK	
120	*4-930-512-01	PLATE, GROUND	
121	4-924-478-01	BELT (TIMING)	
122	X-4924-443-1	PULLEY ASSY	
123	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
124	7-628-254-00	+PSW, 2.6X5	
125	7-685-135-19	SCREW +P 2.6X10 TYPE2 NON-SLIT	
126	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
127	4-930-504-01	BRACKET (BU)	
128	7-682-547-09	SCREW +B 3X6	
911	*1-631-041-11	PC BOARD, LOADING SW	
912	*1-631-037-11	PC BOARD, POWER	
913	⚠.1-551-188-XX	(E).............CORD, POWER	
	⚠.1-551-478-00	(US,Canadian)...CORD, POWER	
914	⚠.1-526-565-00	(E).......AC PLUG, ADAPTOR	
915	⚠.1-555-795-00	(AEP)...........CORD, POWER	
916	*A-4617-163-A	MOUNTED PCB, MAIN	
919	*1-631-040-11	PC BOARD, CLOSE/DOWN SW	
920	*1-631-039-11	PC BOARD, UP/OPEN SW	
BP951	*1-535-771-11	TERMINAL	
BP952	*1-535-771-11	TERMINAL	
M771	A-4604-228-A	MOTOR ASSY, LOADING	
T901	⚠.1-449-716-11	(US,Canadian)...TRANSFORMER, POWER	
T901	⚠.1-449-717-11	(AEP)...........TRANSFORMER, POWER	
T901	⚠.1-449-718-11	(E).............TRANSFORMER, POWER	

5-4. OPTICAL PICK-UP BLOCK (BU-5C)


918
(including in M102)
153
154
152
151
152
M102
M101
S101
155
917

No.	Part No.	Description	Remarks
151	4-917-565-01	SHAFT, SLED	
152	4-917-562-01	INSULATOR	
153	7-621-255-15	SCREW +P 2X3	
154	4-917-567-01	GEAR (M)	
155	4-917-564-01	GEAR (P), FLATNESS	

No.	Part No.	Description	Remarks
917	1-626-304-11	PC BOARD, SL/SP MOTOR	
918	8-848-062-01	DEVICE, OPTICAL KSS-150A(H)	
M101	X-4917-504-1	ASSY, MOTOR (SLED)	
M102	X-4917-523-1	ASSY, MOTOR (SPINDLE)	
S101	1-571-274-11	SWITCH, LEAF (LIMIT IN)	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: µF, PF: µµF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: µH

SEMICONDUCTORS
In each case, U: µ, for example:
UA...: µA..., UPA...: µPA...,
UPC...: µPC, UPD...: µPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			
901	*1-631-036-11	PC BOARD, INDICATOR			
902	*1-631-035-11	PC BOARD, TRANSLATION			
903	*1-631-044-11	(C800,C8ESD)...PC BOARD, TIMER SW			
904	1-631-042-11	(C700)...PC BOARD, VR			
906	*1-631-046-11	PC BOARD, KEY SW			
907	*1-631-043-11	(C800,C8ESD)...PC BOARD, REMOCON VR			
908	*1-631-045-11	(C800,C8ESD)...PC BOARD, HEADPHONE			
909	1-452-340-21	MAGNET			
910	*1-631-038-11	PC BOARD, SENSOR			
911	*1-631-041-11	PC BOARD, LOADING SW			
912	*1-631-037-11	PC BOARD, POWER			
913	⚠.1-551-188-XX	(E).............CORD, POWER			
	⚠.1-551-478-00	(US,Canadian)...CORD, POWER			
914	⚠.1-526-565-00	(E).....AC PLUG, ADAPTOR			
915	⚠.1-555-795-00	(AEP)...CORD, POWER			
916	*A-4617-163-A	MOUNTED PCB, MAIN			
917	1-626-304-11	PC BOARD, SL/SP MOTOR			
918	8-848-062-01	DEVICE, OPTICAL KSS-150A(H)			
919	*1-631-040-11	PC BOARD, CLOSE/DOWN SW			
920	*1-631-039-11	PC BOARD, UP/OPEN SW			
BP951	*1-535-771-11	TERMINAL			
BP952	*1-535-771-11	TERMINAL			
C101	1-162-199-31	CERAMIC	10PF	5%	50V
C102	1-162-294-31	CERAMIC	0.001MF	10%	50V
C103	1-162-199-31	CERAMIC	10PF	5%	50V
C104	1-136-173-00	FILM	0.47MF	5%	50V
C105	1-126-101-11	ELECT	100MF	20%	16V
C106	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C107	1-136-159-00	FILM	0.033MF	5%	50V
C108	1-136-153-00	FILM	0.01MF	5%	50V
C109	1-136-153-00	FILM	0.01MF	5%	50V
C110	1-126-233-11	ELECT	22MF	20%	25V
C111	1-126-233-11	ELECT	22MF	20%	25V
C112	1-164-159-11	CERAMIC	0.1MF		50V
C113	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C114	1-124-902-00	ELECT	0.47MF	20%	50V
C115	1-130-480-00	MYLAR	0.0056MF	5%	50V
C201	1-161-379-00	CERAMIC	0.01MF	30%	16V
C202	1-123-875-11	ELECT	10MF	20%	50V
C204	1-126-233-11	ELECT	22MF	20%	25V
C205	1-136-165-00	FILM	0.1MF	5%	50V
C206	1-123-382-00	ELECT	3.3MF	20%	50V
C207	1-136-159-00	FILM	0.033MF	5%	50V
C208	1-136-165-00	FILM	0.1MF	5%	50V
C209	1-106-359-00	MYLAR	0.0047MF	5%	50V
C210	1-162-294-31	CERAMIC	0.001MF	10%	50V
C211	1-126-233-11	ELECT	22MF	20%	25V
C212	1-162-282-31	CERAMIC	100PF	10%	50V
C213	1-161-379-00	CERAMIC	0.01MF	30%	16V
C214	1-124-927-11	ELECT	4.7MF	20%	50V
C215	1-124-499-11	ELECT	1MF	20%	50V
C216	1-126-233-11	ELECT	22MF	20%	25V
C217	1-164-159-11	CERAMIC	0.1MF		50V
C218	1-164-159-11	CERAMIC	0.1MF		50V
C219	1-162-294-31	CERAMIC	0.001MF	10%	50V
C220	1-164-159-11	CERAMIC	0.1MF		50V
C221	1-164-159-11	CERAMIC	0.1MF		50V
C254	1-164-159-11	CERAMIC	0.1MF		50V
C255	1-164-159-11	CERAMIC	0.1MF		50V
C256	1-164-159-11	CERAMIC	0.1MF		50V
C257	1-164-159-11	CERAMIC	0.1MF		50V
C258	1-136-165-00	FILM	0.1MF	5%	50V
C259	1-130-472-00	MYLAR	0.0012MF	5%	50V
C260	1-106-359-00	MYLAR	0.0047MF	5%	50V
C261	1-126-101-11	ELECT	100MF	20%	16V
C262	1-126-101-11	ELECT	100MF	20%	16V
C264	1-162-294-31	CERAMIC	0.001MF	10%	50V
C265	1-164-159-11	CERAMIC	0.1MF		50V
C301	1-136-173-00	FILM	0.47MF	5%	50V
C302	1-162-294-31	CERAMIC	0.001MF	10%	50V
C303	1-126-233-11	ELECT	22MF	20%	25V
C304	1-161-379-00	CERAMIC	0.01MF	30%	16V
C305	1-130-485-00	MYLAR	0.015MF	5%	50V
C306	1-161-379-00	CERAMIC	0.01MF	30%	16V
C307	1-136-159-00	FILM	0.033MF	5%	50V
C308	1-124-902-00	ELECT	0.47MF	20%	50V
C309	1-126-233-11	ELECT	22MF	20%	25V
C351	1-164-159-11	CERAMIC	0.1MF		50V
C352	1-164-159-11	CERAMIC	0.1MF		50V
C355	1-161-379-00	CERAMIC	0.01MF	30%	16V
C356	1-136-165-00	FILM	0.1MF	5%	50V
C357	1-162-203-31	CERAMIC	15PF	5%	50V
C358	1-162-204-31	CERAMIC	16PF	5%	50V
C359	1-136-165-00	FILM	0.1MF	5%	50V
C360	1-162-294-31	CERAMIC	0.001MF	10%	50V
C361	1-164-159-11	CERAMIC	0.1MF		50V
C400	1-106-359-00	MYLAR	0.0047MF	5%	50V
C401	1-130-472-00	MYLAR	0.0012MF	5%	50V
C402	1-130-489-00	MYLAR	0.033MF	5%	50V
C403	1-130-489-00	MYLAR	0.033MF	5%	50V
C404	1-123-333-00	ELECT	100MF	20%	25V
C405	1-162-199-31	CERAMIC	10PF	5%	50V
C406	1-124-995-11	ELECT	220MF	20%	10V
C407	1-123-321-00	ELECT	220MF	20%	16V
C408	1-123-321-00	ELECT	220MF	20%	16V
C410	1-130-491-00	MYLAR	0.047MF	5%	50V
C411	1-130-491-00	MYLAR	0.047MF	5%	50V
C415	1-130-467-00	MYLAR	470PF	5%	50V
C500	1-106-359-00	MYLAR	0.0047MF	5%	50V
C501	1-130-472-00	MYLAR	0.0012MF	5%	50V
C502	1-130-489-00	MYLAR	0.033MF	5%	50V
C503	1-130-489-00	MYLAR	0.033MF	5%	50V
C504	1-123-333-00	ELECT	100MF	20%	25V
C505	1-162-199-31	CERAMIC	10PF	5%	50V
C506	1-124-995-11	ELECT	220MF	20%	10V
C510	1-130-491-00	MYLAR	0.047MF	5%	50V
C511	1-130-491-00	MYLAR	0.047MF	5%	50V
C515	1-130-467-00	MYLAR	470PF	5%	50V
C711	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C751	1-124-611-00	(C800,C8ESD)...ELECT	1MF	20%	50
C752	1-124-443-00	(C800,C8ESD)...ELECT	100MF	20%	10
C753	1-162-290-31	CERAMIC	470PF	10%	50V
C754	1-162-290-31	CERAMIC	470PF	10%	50V
C755	1-164-159-11	CERAMIC	0.1MF		50V
C771	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C801	1-161-379-00	CERAMIC	0.01MF	30%	16V
C802	1-161-379-00	CERAMIC	0.01MF	30%	16V
C803	1-124-225-00	ELECT	100MF	20%	6.3V
C804	1-162-294-31	CERAMIC	0.001MF	10%	50V
C805	1-162-294-31	CERAMIC	0.001MF	10%	50V
C851	1-124-225-00	ELECT	100MF	20%	6.3V
C900	1-126-244-51	ELECT	47000MF		5.5V
C901	1-126-013-11	ELECT	1000MF	20%	16V
C902	1-126-012-11	ELECT	470MF	20%	16V
C903	1-124-927-11	ELECT	4.7MF	20%	50V
C904	1-161-379-00	CERAMIC	0.01MF	30%	16V
C905	1-124-927-11	ELECT	4.7MF	20%	50V
C906	1-123-875-11	ELECT	10MF	20%	50V
C907	1-164-159-11	CERAMIC	0.1MF		50V
C908	1-164-159-11	CERAMIC	0.1MF		50V
C909	1-126-017-11	ELECT	6800MF	20%	16V
C910	1-126-016-11	ELECT	4700MF	20%	16V
C911	1-124-927-11	ELECT	4.7MF	20%	50V
C912	1-126-012-11	ELECT	470MF	20%	16V
C913	1-124-572-11	ELECT	100MF	20%	63V
C915	1-124-122-11	ELECT	100MF	20%	50V
C956	1-126-233-11	ELECT	22MF	20%	25V
C957	1-164-159-11	CERAMIC	0.1MF		50V
CN101	*1-564-706-31	PIN, CONNECTOR (SMALL TYPE) 4P			
CN102	*1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CN251	*1-564-336-00	PIN, CONNECTOR 2P			
CN252	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN253	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN352	*1-564-666-11	PIN, CONNECTOR 10P			
CN400	*1-564-506-11	PLUG, CONNECTOR 3P			
CN401	*1-564-509-11	PLUG, CONNECTOR 6P			
CN402	*1-564-506-11	(C800,C8ESD)...PLUG, CONNECTOR 3P			
CN403	*1-564-506-11	PLUG, CONNECTOR 3P			
CN721	*1-564-666-11	PIN, CONNECTOR 10P			
CN722	*1-564-666-11	PIN, CONNECTOR 10P			
CN723	*1-564-338-00	PIN, CONNECTOR 4P			
CN724	*1-564-338-00	PIN, CONNECTOR 4P			
CN725	*1-564-341-11	PIN, CONNECTOR 7P			
CN726	*1-564-341-11	PIN, CONNECTOR 7P			
CN727	*1-564-339-00	PIN, CONNECTOR 5P			
CN728	*1-564-339-00	PIN, CONNECTOR 5P			
CN751	*1-564-336-00	(C800,C8ESD)...PIN, CONNECTOR 2P			
CN752	*1-564-337-00	(C800,C8ESD)...PIN, CONNECTOR 3P			
CN753	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CN754	*1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN761	*1-564-495-11	PIN, CONNECTOR 2P			
CN851	*1-506-503-11	PIN, CONNECTOR 9P			
CN852	*1-564-336-00	PIN, CONNECTOR 2P			
CN901	*1-564-341-11	PIN, CONNECTOR 7P			
CN951	*1-564-506-11	PLUG, CONNECTOR 3P			
CN952	*1-564-506-11	PLUG, CONNECTOR 3P			
CN953	*1-564-509-11	PLUG, CONNECTOR 6P			
CN954	*1-564-339-00	PIN, CONNECTOR 5P			
CN955	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CN956	*1-564-705-11	(EXCEPT for C700:US) ...PIN, CONNECTOR (SMALL TYPE) 3P			
D101	8-719-107-94	DIODE 1SS202-1			
D751	8-719-970-49	(C800,C8ESD)...DIODE BR4361F			
D851	8-719-938-68	DIODE GL3HY8			
D900	8-719-107-94	DIODE 1SS202-1			
D901	8-719-107-94	DIODE 1SS202-1			
D902	8-719-200-77	DIODE 10E2N			
D903	8-719-107-94	DIODE 1SS202-1			
D904	8-719-109-81	DIODE RD4.7ES-B2			
D905	8-719-107-94	DIODE 1SS202-1			
D906	8-719-107-94	DIODE 1SS202-1			
D907	8-719-200-77	DIODE 10E2N			
D908	8-719-200-77	DIODE 10E2N			
D909	8-719-107-94	DIODE 1SS202-1			
D910	8-719-107-94	DIODE 1SS202-1			
D911	8-719-200-77	DIODE 10E2N			
D912	8-719-200-77	DIODE 10E2N			
D913	8-719-110-21	DIODE RD11ESB1			
D914	8-719-107-94	DIODE 1SS202-1			
FL801	1-519-450-11	INDICATOR TUBE, FLUORESCENT			
IB101	1-233-171-11	COMPOSITION CIRCUIT BLOCK			
IB102	1-233-171-11	COMPOSITION CIRCUIT BLOCK			
IC101	8-752-034-00	IC CXA1081S			
IC201	8-752-032-33	IC CXA1182S			
IC251	8-752-035-28	IC CXA-1291P			
IC252	8-752-035-28	IC CXA-1291P			
IC301	8-752-323-64	IC CXK5816M-12L			
IC302	8-752-328-62	IC CXD1125Q			

Ref.No.	Part No.	Description			
IC351	8-759-633-71	IC M50747-B56SP			
IC352	8-759-820-64	IC LC9600R-183			
IC353	8-759-605-44	IC M74HC6004P			
IC354	8-752-334-06	IC CXD2551P			
IC400	8-759-989-83	(C800,C8ESD)...IC AD1860N-K			
IC400	8-759-938-46	(C700) ... IC PCM56P-JS			
IC401	8-759-982-03	(C800,C8ESD)...IC RC5532DD			
IC500	8-759-989-83	(C800,C8ESD)...IC AD1860N-K			
IC500	8-759-938-46	(C700) ... IC PCM56P-JS			
IC501	8-759-982-03	(C800,C8ESD)...IC RC5532DD			
IC711	8-719-970-19	DIODE GP1A521			
IC751	8-759-962-08	(C800,C8ESD)...IC BA6208			
IC801	8-752-810-65	IC CXP50116-101Q			
IC851	8-749-920-83	IC GP1U52XB			
IC900	8-759-630-21	IC M5290P-16			
IC901	8-759-633-42	IC M5293L			
IC951	8-759-977-71	(EXCEPT for C700:US)...IC GP1F31T			
J751	1-568-519-21	JACK, LARGE TYPE (HEADPHONES)			
J951	1-566-921-11	(C700)....JACK, PIN 2P (LINE OUT)			
J951	1-568-760-11	(C8ESD)...JACK, PIN 4P (LINE OUT)			
J951	1-568-761-11	(C800)....JACK, PIN 4P (LINE OUT)			
L301	*1-410-858-11	(EXCEPT for C700:US)...INDUCTOR	OUH		
L351	*1-410-858-11	INDUCTOR	OUH		
L801	*1-410-858-11	INDUCTOR	OUH		
L901	*1-410-858-11	INDUCTOR	OUH		
M101	X-4917-504-1	ASSY, MOTOR (SLED)			
M102	X-4917-523-1	ASSY, MOTOR (SPINDLE)			
M711	A-4604-232-A	MOTOR ASSY, ROTARY			
M771	A-4604-228-A	MOTOR ASSY, LOADING			
Q101	8-729-116-57	TRANSISTOR 2SB1068K			
Q201	8-729-900-80	TRANSISTOR DTC114ES			
Q202	8-729-900-80	TRANSISTOR DTC114ES			
Q351	8-729-900-80	TRANSISTOR DTC114ES			
Q402	8-729-107-99	TRANSISTOR 2SC3622AK			
Q403	8-729-107-99	TRANSISTOR 2SC3622AK			
Q404	8-729-107-99	TRANSISTOR 2SC3622AK			
Q406	8-729-806-10	TRANSISTOR 2SA1348			
Q500	8-729-107-99	TRANSISTOR 2SC3622AK			
Q501	8-729-107-99	TRANSISTOR 2SC3622AK			
Q502	8-729-107-99	TRANSISTOR 2SC3622AK			
Q900	8-729-820-15	TRANSISTOR 2SB1274R			
Q901	8-729-811-29	TRANSISTOR 2SD1388			
Q902	8-729-900-80	TRANSISTOR DTC114ES			
Q903	8-729-000-74	TRANSISTOR DTC143TS			
Q905	8-729-204-83	TRANSISTOR 2SA1048GR			
R101	1-247-806-11	CARBON	91	5%	1/4W
R102	1-249-397-11	CARBON	22	5%	1/4W
R103	1-247-864-11	CARBON	24K	5%	1/4W
R104	1-249-433-11	CARBON	22K	5%	1/4W
R105	1-249-432-11	CARBON	18K	5%	1/4W
R106	1-249-432-11	CARBON	18K	5%	1/4W
R107	1-249-425-11	CARBON	4.7K	5%	1/4W
R108	1-249-441-11	CARBON	100K	5%	1/4W
R109	1-249-425-11	CARBON	4.7K	5%	1/4W
R110	1-249-417-11	CARBON	1K	5%	1/4W
R201	1-247-882-11	CARBON	130K	5%	1/4W
R202	1-247-896-11	CARBON	510K	5%	1/4W
R203	1-249-423-11	CARBON	3.3K	5%	1/4W
R204	1-249-435-11	CARBON	33K	5%	1/4W
R205	1-247-889-00	CARBON	270K	5%	1/4W
R206	1-249-440-11	CARBON	82K	5%	1/4W
R207	1-249-417-11	CARBON	1K	5%	1/4W
R208	1-249-417-11	CARBON	1K	5%	1/4W
R209	1-249-417-11	CARBON	1K	5%	1/4W
R210	1-249-441-11	CARBON	100K	5%	1/4W
R211	1-215-434-00	METAL	3.6K	1%	1/6W
R212	1-249-417-11	CARBON	1K	5%	1/4W
R213	1-249-441-11	CARBON	100K	5%	1/4W
R214	1-249-414-11	CARBON	560	5%	1/4W
R215	1-249-429-11	CARBON	10K	5%	1/4W
R216	1-249-433-11	CARBON	22K	5%	1/4W
R220	1-249-425-11	CARBON	4.7K	5%	1/4W
R221	1-249-417-11	CARBON	1K	5%	1/4W
R251	1-249-393-11	CARBON	10	5%	1/4W
R252	1-249-393-11	CARBON	10	5%	1/4W
R254	1-249-393-11	CARBON	10	5%	1/4W
R255	1-249-427-11	CARBON	6.8K	5%	1/4W
R256	1-247-881-00	CARBON	120K	5%	1/4W
R257	1-247-854-11	CARBON	9.1K	5%	1/4W
R258	1-247-854-11	CARBON	9.1K	5%	1/4W
R259	1-247-883-00	CARBON	150K	5%	1/4W
R260	1-247-878-00	CARBON	91K	5%	1/4W
R261	1-247-882-11	CARBON	130K	5%	1/4W
R262	1-247-886-11	CARBON	200K	5%	1/4W
R263	1-249-437-11	CARBON	47K	5%	1/4W
R264	1-249-435-11	CARBON	33K	5%	1/4W
R265	1-249-441-11	CARBON	100K	5%	1/4W
R266	1-249-441-11	CARBON	100K	5%	1/4W
R268	1-247-885-00	CARBON	180K	5%	1/4W
R269	1-247-885-00	CARBON	180K	5%	1/4W
R270	1-249-393-11	CARBON	10	5%	1/4W
R271	1-247-903-00	CARBON	1M	5%	1/4W
R272	1-247-903-00	CARBON	1M	5%	1/4W
R301	1-249-411-11	(EXCEPT for C700:US) ...CARBON	330	5%	1/4W
R302	1-215-469-00	METAL	100K	1%	1/6W
R303	1-215-469-00	METAL	100K	1%	1/6W
R304	1-249-429-11	CARBON	10K	5%	1/4W
R305	1-249-441-11	CARBON	100K	5%	1/4W
R306	1-249-429-11	CARBON	10K	5%	1/4W
R307	1-249-417-11	CARBON	1K	5%	1/4W
R308	1-249-433-11	CARBON	22K	5%	1/4W
R309	1-247-903-00	CARBON	1M	5%	1/4W
R310	1-249-417-11	CARBON	1K	5%	1/4W
R311	1-249-417-11	CARBON	1K	5%	1/4W
R312	1-249-417-11	CARBON	1K	5%	1/4W
R351	1-249-429-11	CARBON	10K	5%	1/4W
R352	1-249-429-11	CARBON	10K	5%	1/4W
R353	1-249-435-11	CARBON	33K	5%	1/4W
R354	1-249-436-11	CARBON	39K	5%	1/4W
R355	1-249-429-11	CARBON	10K	5%	1/4W
R356	1-249-429-11	CARBON	10K	5%	1/4W
R357	1-249-429-11	CARBON	10K	5%	1/4W
R358	1-247-903-00	CARBON	1M	5%	1/4W

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Audio Group

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